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JOURNAL  
OF THE  
*Association of American Medical Colleges*

Vol. 24 No. 2

FRED C. ZAPFFE, Editor

March, 1949

**Orientation Courses for Medical Students\***

THOMAS M. PEERY

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Washington, D. C.

Prior to 1947, it had been our custom at the George Washington University School of Medicine, to start the first year class at high speed. Following the fanfare and the speechmaking of the opening day of school, Dean Bloedorn would announce that the freshman would meet the professor of anatomy at 1:00 P. M. Friendly, sympathetic laughter would ripple through the audience as upper classmen and faculty recalled their own sensations on their first day of medical school.

I can recall my own quite vividly. I had been forewarned by the chairman of the Admissions Committee that I would probably have difficulty in medical school because of my youth. I was new in the city where my medical school was located and had no close friends or relatives there. I had made temporary arrangements for a room and for meals. I still had to learn the bus and trolley routes, where to get my laundry done, where I could get a check cashed, receive my mail and all the other details that are a part of change in residence.

No allowances were made in the curriculum to meet these needs. We were given a box of bones at the end of the first day of school, told to purchase our books, colored pencils, notebooks, etc., and to be prepared the following morning for a quiz on the clavicle. Two of my classmates dropped out of school during that first week. The tension was terrific.

In the Spring of 1947, the Curriculum Committee of the George Washington University School of Medicine recommended to the faculty that an orientation course be established for freshmen medical students.

It is interesting to note that the proposal met no opposition and was enthusiastically received, although it meant shortening the semester by two weeks. If the request had been for reduction of one hour per week of instruction time during the first semester, the proposal would probably have been criticized sharply. Department heads do not seem to object to the shortening of a semester nearly as much as to the reduction in the number of hours per week on the printed schedule.

We decided on a two weeks program of orientation and indoctrination.

\*Read at the Fifty-ninth Annual Meeting of the Association of American Medical Colleges, held at White Sulphur Springs, W. Va., November 8-10, 1948.

During this time there were to be six lectures per day, but no quizzes or examinations; no home study was to be required.

The purposes of the program were to be:

1.—To start the year in such a way that the student would have time to get settled in a strange city.

2.—To show the relationship between premedical and medical education.

3.—To acquaint the student with the field of medicine, and with some of the faculty of our school of medicine.

4.—To point out the responsibilities and ethical principles inherent in medical practice.

The content and detail of the orientation program are shown in the tables which follow. Certain changes were made after the first year, chiefly a shortening of the program; these changes are also shown.

TABLE 1.—CONTENT OF THE ORIENTATION PROGRAM.

	Hours	
	1947	1948
Physics in Medicine .....	11	4
Biology in Medicine .....	11	4
Evaluation of Scientific Evidence .....	11	5
Sociology in Medicine .....	10	4
Chemistry in Medicine .....	4	1
Psychology in Medicine .....	5	4
Language of Medicine .....	5	4
Basic Sciences of Medicine .....	6	1

TABLE 2.—PHYSICS IN MEDICINE (1947).

1. Physics of light: microscope, cystoscope, gastroscope, etc.  
—Physicist, National Bureau of Standards.
2. Optics of Vision.  
—Professor of Ophthalmology.
3. Sound Formation and Transmission; Physical Principles in Hearing.  
—Clinical Professor of Otorhinolaryngology.
- 4.\* Physical Principles of Percussion and Auscultation.  
—Associate in Medicine (in charge of Physical Diagnosis Teaching.)
- 5\* and 6.\* Electrical Impulses in the Living Body: Action Currents; Reaction of Degeneration; Cardiac and Encephalic Currents.  
—Associate Professor of Physiology.
- 7\* and 8. Radiant Energy: X-rays and Radium.  
—Assistant Professor of Radiology.
- 9 and 10. Physical Principles of Posture, Locomotion and Weight Bearing.  
—Assistant Clinical Professor of Orthopedic Surgery (B. S. in Engineering).
11. Principles of Hydraulics; Circulation of Body Fluids.  
—Professor of Physiology.

\*These topics comprised the series as presented in 1948.

TABLE 3.—BIOLOGY IN MEDICINE (1947).

- 1.\* Classification of Animal Life. Man's Place in the Animal Kingdom.  
—Professor of Anatomy.
- 2 and 3. Genetics; Inheritance in Man.  
—Managing Editor, Journal of Heredity.
- 4 and 5.\* Environmental Factors in Man's Development. Man's Primate Heritage.  
—Curator of Physical Anthropology, Smithsonian Institution.
6. Comparative Embryology.  
—Professor of Anatomy.
7. Growth and Development in Man.  
—Assistant Professor of Anatomy.
8. Architecture of Human Body.  
—Assistant Professor of Anatomy.
- 9.\* Functional Organization of Human Body.  
—Assistant Professor of Anatomy.
- 10.\* A Concept of Health and Disease.  
—Professor of Medicine.
11. Causative Factors in Disease.  
—Professor of Pathology.

\*These topics comprised the series as presented in 1948.



TABLE 4.—EVALUATION OF SCIENTIFIC EVIDENCE (1947).

(All presentations by the Professor of Physiology.)

- 1.\* The Concept of a Variable.
- 2.\* The Relationship between Multiple Variables.
- 3.\* What is an Experiment?
- 4.\* Sources of Error in Experiment Design.
- 5.\* The Influence of Chance on Experimental Results.
- 6.\* The Determination of Statistical Significance.
- 7.\* The Derivation of Conclusions from Experiments.
- 8, 9, 10, and 11. Evaluation of Scientific Data in Medical Journals.

\*These presentations were combined into five sessions in 1948.

TABLE 5.—SOCIOLOGY IN MEDICINE (1947).

1. The Selection of Medical Students.  
—Member of the Admissions Committee.
- 2.\* Ideals and Aims of the Medical Profession.  
—Dean of the School of Medicine.
3. The Physician and Allied Professions.  
—Superintendent of the University Hospital.
- 4.\* The Patient-Physician Relationship.  
—Professor of Obstetrics and Gynecology.
- 5.\* The Physician and His Colleagues: Medical Ethics.  
—Professor of Surgery.
- 6.\* The Physician, His Home and His Community: Public Health.  
—Adjunct Professor of Public Health Practice.
7. The Physician, the Law and Government.  
—Professor of Psychiatry.
8. Systems of Medical Practice.  
—Professor of Obstetrics and Gynecology.
- 9.\* and 10. Medical Care Distribution; Medical Economics.  
—Executive Secretary, Medical Society of the District of Columbia.

\*These topics comprised the series as presented in 1948.

TABLE 6.—CHEMISTRY IN MEDICINE (1947).

1. Chemical Composition of the Body; Function of Various Components.  
—Professor of Biochemistry.
2. Dialysis, Osmosis, Colloids, etc.  
—Professor of Biochemistry.
3. Catalysts and Enzymes in the Body.  
—Professor of Biochemistry.
4. Chemical Agents in Pharmacology.  
—Professor of Pharmacology.
- 5.\* The Contributions of Chemistry to Medicine.  
—Professor of Biochemistry.

\*This was the only topic presented in 1948.

TABLE 7.—PSYCHOLOGY IN MEDICINE (1947).

1. Personality Structure and Mental Mechanisms.  
—Associate in Psychiatry.
- 2.\* Normal Mental and Emotional Development.  
—Clinical Professor of Psychiatry.
- 3.\* Conditioning Factors in Emotional Reactions.  
—Clinical Professor of Psychiatry.
4. Psychological Tests.  
—Clinical Psychologist.
- 5.\* Contributions of Psychology to Medicine.  
—Professor of Psychiatry.

\*These topics, plus the new topic, "The Origins of Medicine and Psychology" were presented in 1948.

TABLE 8.—LANGUAGE OF MEDICINE (1947).

- 1.\* 2.\* 3.\* and 4. Derivation and Usage of Common Medical Words.  
—Professor of Psychiatry.
- 5.\* Medical Libraries and How to Use Them.  
—Clinical Professor of Medicine.

\*These topics comprised the series that were presented in 1948.

TABLE 2.—BASIC SCIENCES AND THEIR CONTRIBUTION TO MEDICINE (1947).

1. Contribution of Anatomy to Medicine. —Professor of Anatomy.
2. Contributions of Bacteriology to Medicine. —Professor of Bacteriology.
- 3.\* Contributions of Pharmacology to Medicine. —Professor of Pharmacology.
4. Contributions of Pathology to Medicine. —Professor of Pathology.

\*This was the only one of these topics presented in 1948.

After the completion of the series in 1947, it was immediately evident that two weeks is longer than is necessary for orientation and the program was accordingly reduced to one week in September, 1948.

The faculty approves wholeheartedly of this program. Certainly, we have been able to secure help from all departments in developing the series. The tension of the students was relieved in a remarkable way and they were able to get down to serious studying without a lot of false starts. Our program will be continued in the future, although it may be modified from time to time.

It was difficult to decide on the proper instructor for some of the topics. This was particularly true in the series, "Language of Medicine" and the series, "Sociology in Medicine." It is obvious that it matters little what department is represented in these discussions. The key to the success of the program is the selection of speakers who understand medical education in the broadest sense and who have a philosophical approach to medical practice as well as scientific ability.

In October of this year, questionnaires were circulated among the members of the freshman and sophomore classes. A full year had elapsed since the sophomore class received their instruction, while the freshmen had just completed theirs. Some of the differences in the answers to the questionnaire can, I believe, be explained on the basis of the mental digestion which took place during the year in the case of the sophomores. For example, many of the freshmen felt that some of the material was presented too early. The sophomores, on the other hand, felt that the same instruction had not been too early. In the questionnaire, no space was provided for the name of the student. I believe their answers depict their true feelings about the program.

The following are excerpts from voluntary comments made by the students:

"The value was greater than many of the students realized. . . . An actual orientation is accomplished in these two weeks that more than offsets any loss of time for studying the formal courses."

"Of prime importance is the selection of the very best speakers possible."

"During the two weeks, the 1st semester course in 'History of Medicine' should be given. . . . Assignment of textbooks, equipment needs, lockers and laboratory equipment should be made. Then the transition at the end of the orientation would mesh smoothly with the high gear of the regular curriculum."

"... should be continued ... because, above all, it relaxes him and removes some of the apprehension."

"Felt that program might have been improved by the addition of more practical material—say a lecture on "Getting Along in Medical School," including number of hours required for study, where classrooms are located, library facilities. etc."

"It surely helped those of us from out of town to get settled before heavy studying started."

"In talking to students from other medical schools in which they jumped into school immediately, I fully realize that the orientation program is of great benefit."

"Concentrate on sociological aspects; leave scientific data to the medical curriculum."

"The orientation program sets at ease the minds of some who are ready to go home the first week!"

(and one unfavorable comment)—

"It is a shame to take the edge off the enthusiasm for studying by slowing our eager class to a beginning snail's pace."

In the questionnaire, an attempt was made to evaluate the different parts of the program as well as the whole. As was to be expected, there was some criticism of individual presentations. On the other hand, the reaction to the series as a whole was uniformly favorable. All but one of about 120 students replying, stated that the program should be continued.

Although we have taken no steps in this direction, it appears to me that there should be other programs of orientation at different times in the medical curriculum. At the beginning of the clinical clerkship, several days could well be spent in going over with the student the various aspects of hospital care of the patient. This could include the psychology of the patient, hospital formulary, a discussion of the student's place in the hospital, a consideration of laboratory procedures to be performed, of hospital records, etc. Much lost time and wasted motion could probably be avoided in this way.

At the beginning of the senior year, a number of sessions should be presented in which the importance of the internship is stressed, giving the students advice on how to select their internships, methods of application, etc. At about this same time, it would be well to have a number of physicians discuss with the students the nature of practice in their particular specialty, and the nature of general practice. Students, and for that matter, interns and residents, actually have little opportunity to form an opinion about the different specialties. They are familiar with the nature of hospital practice, but office practice and home visits are completely strange to most of them.

And, finally, near the completion of the senior year, discussions should be held on state board requirements, reciprocity, narcotic licenses, the legal responsibilities of the physician, medical ethics, etc.

In summary, I feel that the student should be prepared for each phase of his career. Orientation is particularly important for the freshman medical student, since he may be overwhelmed by the new problems which confront him. Give him a little time and a guiding hand. They will not be wasted.

#### DISCUSSION

DR. R. H. WOOD (Emory University): We started an orientation program for freshmen medical students in September, 1946, and have continued it. We have not attempted as extensive a program as Dr. Peery and Dr. Bloedorn have at George Washington. Beginning with an allotment of one week, we have now reduced the time to three days.

In the program we try to cover the following points: The first is the student's motivation. We had one very interesting reaction in that one student withdrew after the first day. We had a student participation type of discussion with three or four

faculty members present, and discussed very intensively for an hour, the importance of having a good, sound reason for studying medicine. We wrote the reasons on the blackboard as they came from the students or faculty; they could be boiled down to, perhaps, six or seven, out of about twenty given. The next day there was a telegram on the desk from a doctor's son which said, "Sorry, will not be back. Letter follows." His letter stated that it suddenly dawned on him he did not have that kind of a reason for studying medicine. He went back and talked it over with his father and decided to do something else. We felt that if our orientation had accomplished nothing but this, it was worth while.

The next thing emphasized is how to study, the importance of correlation and integration. We strived to present the idea that the study of medicine is really the study of the biology of man in all of its aspects in relation to his total environment. We have to break it down rather artificially into several departments and several subjects in order to get at it, but these departments and separate courses are integral parts of the one whole, which is the study of the biology of man.

Then the environmental and social aspects of medicine are stressed. It was stated to the class last fall that we hoped they would not lose something they already had when they came to medical school. I had this in mind for the faculty as much as for the students. It does seem to me that frequently a medical student has a better concept of his future place in society as a physician when he enters school than when he leaves it, or even when he finishes his residency. He comes in with the understanding he is to deal with people who live in a world, who have a home, a church, a job, and a family. When he finishes his residency, he knows about diseases, organs, and tests, and has forgotten about people, so that a patient is considered as a specimen of the genus *homo* in bed, rather than a person in society.

We then take him through the library and the medical librarian tells him how to use it and its importance, and he meets the hospital and various affiliated groups of medical personnel with whom he will have to work in the future.

In the final clinical program, we selected last year, and again this year, a patient. We had a member of the house staff present the patient in the ordinary way, except that he made his language a little less technical and more the language of the street. However, he did put in some technical terms, to let them know there are some words to learn, too. It happened that the case in 1947 was a patient who had a gunshot wound, through both legs, producing an arterio-venous fistula on one side and a peroneal paralysis on the other. It was discussed by the anatomist, pathologist, vascular surgeon, pharmacologist, bacteriologist, and others. The students were thus able to see the faculty in action and get a bird's-eye view of why they had to learn certain basic things in order to consider intelligently a patient at the bedside.

This fall we had a patient with hypothyroidism and congestive heart failure, which was probably a little too complicated, because some of the students were rather overwhelmed with the mass of knowledge they would have to master.

The final event of the orientation program is a reception for the class held in the evening of the last day, to which the various faculty members, and particularly the faculty advisers are invited. We assign about four students in each class to a member of the faculty as the faculty adviser throughout the four years, and at that reception, the student and his adviser have an opportunity to get acquainted.

We have felt the orientation program is quite worth while, and are still studying ways and means by which we can make it better. I am particularly glad to hear Dr. Peery's discussion or how they have done it at George Washington.

Dr. D. B. CALVIN (University of Texas): At a meeting of the Association of American Medical Colleges held in Detroit, we presented to the Association a discussion of an orientation program then in operation at the University of Texas, Galves-

ton. Since as that time we were receiving students from the Army and Navy training programs whose training had been accelerated, we felt that there should be some effort made to bring them into contact with the relationship between premedical and medical education in as satisfactory a manner as possible.

The original program as instituted in 1944 was three weeks in length and in essence covered the field in a manner similar to that which has been outlined here today, although I believe the faculty at George Washington University School of Medicine has done a far more satisfactory job in this direction than I have heard discussed previously.

For the second year, our program was reduced to two weeks. Then for two years, it was reduced to one week, and this year only three days were used in orientation proper. There were several problems inherent in such a procedure, and unless the committee in charge of establishing, organizing, and operating the program is extremely careful in its selection of personnel and content, difficulties will arise. Of importance is the manner of faculty approach to the curriculum. It must be emphasized that the time available is strictly for orientation and should not be used solely to add teaching time to the usual medical course.

The point one discussant made is of great importance so far as student reaction is concerned. Students feel that they have come to medical school to study medicine and are keyed up to start an extremely difficult course, only to find that they will have two or three weeks to loaf around a bit. The next week, however, medical classes start with a vengeance and the cross-over proves to be a bit too sudden for some students. It is highly important to maintain the orientation period on a satisfactory level of academic procedure.

This year, after long and serious discussion, the faculty decided it would be better for each department to give careful study to the needs for orientation of premedical students in their own departmental course structure. The additional time formerly used during the orientation week was assigned then to departments for their own use. This seems to have been quite successful this year. For instance, in biochemistry, there have been five or six preliminary discussions on the position occupied by the chemical and physical sciences in medicine, and an introduction was given by the department to the field of biological chemistry. In anatomy, the same procedure was followed, and in physiology we are now having our orientation program spread over a period of sixteen weeks of the first semester so that physics and physiology can be correlated by the department prior to the presentation of the formal course in physiology.

Whether this will work out in future years or whether we will return to a formally organized orientation period later is a matter for experience to determine. The faculty is continuing its study of this curricular activity.

DR. GEORGE H. RUGGY (Ohio State University): There obviously is considerable agreement that some orientation for our entering freshmen is needed, and apparently the idea has been conceived simultaneously in several schools. At Ohio State we started an orientation program in the fall of 1947 and repeated it in 1948. The program has not been as ambitious as either the first or the third programs described here this morning. We have confined our efforts to part of four half days prior to the opening of school.

The freshmen are greeted at eleven o'clock on Friday morning, and then follows a session on Friday afternoon and one on Saturday morning. Then they go to the first football game on Saturday afternoon, which is an important event in Columbus. There is a final session on Monday morning.

The emphasis has been on integration and correlation; that is, pointing out the relationship of the factual material in the basic sciences to the practice of medicine. We have called our first session, "The Structural Basis of Medicine." The students

meet with members of the Anatomy and Pathology Departments, each of whom presents in his own way, through brief 15 minute discussions, something of the relationship which exists between these two areas. Each year one particular structure has been chosen as a focal point for the discussions; i. e., in the first year, the stomach was chosen, and the second, the liver. There follows on Saturday morning, a program which we have called, "The Functional Basis of Medicine," in which the physiologists, biochemists, bacteriologists, and pharmacologists participate; again, commenting generally on integration and correlation and finally focusing on the same structure which had illustrated the previous day's discussions. On Monday morning, the class meets in the hospital where the clinicians present a patient, illustrating some disorder of the aforementioned structure or organ. This presentation follows much the same pattern as that described by Dr. Wood.

In addition to the purely scientific aspects, we have included, on Saturday morning, a discussion by the professor of philosophy on the meaning of ethics. This lecture has been definitely a high point, and it is followed on Monday morning by the Dean's lecture on the ethics of medicine. Each freshman is presented with a copy of the Hippocratic Oath, and the Dean builds his discussion around the Oath.

The students who are new to the campus are given a little insight into the structural organization of the university and a tour of the campus follows.

That we felt the program had been successful is evidenced in the fact that we repeated it almost unchanged this year. Undoubtedly, certain features merit further study, and possible alteration, and I am delighted to hear of other programs, from which I have already picked up some ideas. The newer approach is a far cry from the "orientation" of the past, when the Professor of Biochemistry came in at eight o'clock in the morning on the first day of school and said, "Good morning, gentlemen. I am happy to welcome you to the College of Medicine. You are entering a profession which is second only to the ministry. Carbohydrates are aldehyde and ketone derivatives of polyhydric alcohols . . . , and so on."

DR. E. L. TURNER (University of Washington): The adventure of starting a new medical school is a very interesting one. One of the healthiest things in this field of medicine is the fact that no one seems to be really satisfied with the medical curriculum, and that we are always trying to change it and readjust it and see if we can not do a better job with our students. When I first saw this title on the program, I could not resist the temptation of writing in underneath, "How about orientation for the faculty?" That is perhaps the most important phase of orienting courses properly for students.

We have tried to sit down together and figure out how we can do the best possible job of getting our students to have the training that is going to make them really understand human beings as individuals, as well as know something about the basic problems of medicine. In 1946, we tried a condensed orientation program. That did not work. Since then, we have tried to present our orientation very differently. We have one hour during the week throughout the first year that we devote to this type of thing. I started out with an hour a week for a short period on the philosophy of medicine. What are you here for? What are your objectives? What are we shooting for? What are you after? And in that little course, I present the Hippocratic Oath, and then try to interpret it in terms of present-day interpretations, not just present the oath. We feel very definitely that medical students need to begin to think about some things besides anatomy and biochemistry and physiology very early in their career, so we introduce early in their medical course a short series on medical economics and medical ethics. We think these boys ought to begin to think about some of these things that are appearing in the newspapers and journals all the time, and be reading on these things and be able to ask intelligent questions while they are students. I got out of medical school and did not know a thing about medical economics, and it was a gap



that I had to fill in by myself. At least, we want to get our students to begin to think about some of those things.

Another thing we introduce into this first year very early is a little series of discussions that has a very definite psychiatric turn to it, and it is labeled, "An Introduction to Human Behavior." Why do human beings act as they do in the first place, and what are some of the factors responsible for variations in human behavior? The students are very deeply interested in it.

Another thing we have tried to do is get away from the term "preclinical." When you use this term, the students think that at the end of a certain time they can leave it all behind. We are using the term "basic medical sciences" in place of preclinical, and implying from the very beginning they go all the way through the medical curriculum. Not only that, we are trying to develop these various courses, first through orientation of the faculty, not primarily orientation of the students. If we can get our faculty oriented right, I am not going to worry about the orientation of the students. We try to bring into these basic science courses clinical illustrations from the very beginning that will make them see how basic medical science does infiltrate the whole medical curriculum and their entire life in the future.

There are many ways of going about medical student orientation. First of all, it comes right down to getting your faculty thoroughly interested in it, intelligently discussing it, and then incorporating into their various courses an intelligent approach on the real application of these things that are going to give the students the kind of orientation they need in regard to the human being as an individual and the over-all picture of medicine.

DR. W. H. PERKINS (Jefferson Medical College): I want to throw the responsibilities of this Association back into consideration of the premedical courses. We are trying to orient men who should have been oriented before they came to us. They should have known what the responsibilities are that they are going to face in their chosen profession. We ask them to come prepared in the sciences and humanities, and we have ignored the fact that the men, in the first four years of their academic work, are already involved in the studies in their career. These orientations can be helpful, but they can not substitute for real orientation in the universities and colleges.

DR. A. J. CARLSON (University of Chicago): I have listened to this discussion with a great deal of interest. Certainly, the schools which have tried this orientation course for one, two or three weeks, and tried the different methods, must have discovered that some of the students, at least, already have the fundamental orientation when they come to the class. I would like to stress what Dr. Turner said, that maybe we should have an orientation course for the faculty, because the orientation comes necessarily, it seems to me, as a by-product of good teaching as the student goes along, provided the instructor is not too much up in the ivory tower.

I am surprised that the students felt that this orientation course made them relax. I just can not follow it. You do not relax when you face new and significant problems. I believe the best way would be the "orientation" of the faculty so that as the things go along, the students will get oriented as a by-product all the way. That would be wiser, although a little experience with trial and error of this kind may be worth while. But, on the whole, my experience in the more than forty years I have tried to teach in medicine, is that a good many of the students have this orientation when they come to us and they are ready to follow through if you are really interested in teaching them. To be sure, 'way back, some of the students thought that the first two years of medicine were a waste of time, that they should be with the sick person right away. I will never forget the few months I tried to teach physiology at the University of Pennsylvania Medical School in 1904. Many of these medical students, when the instructor's back was turned to the class, would throw the frogs' legs at the instructor. They thought that frogs have nothing to do with man. That was due to



ignorance of fundamental biology. With better premedicine and better teachers, I think this beginning "orientation" is not necessary.

**DR. WARD DARLEY** (University of Colorado): I would like to suggest that when consideration is being given to orienting medical students, it might be practical to discuss with them the budgetary difficulties with which the medical school is forced to deal. For the past two years, we have, at the beginning of each year, had a student assembly in order to give them a progress report on the current problems that are facing the school of medicine. We give them the figures on the total budget, the sources of income, and indicate the deficits. Along with this, we have outlined the current headaches. This has had a great deal to do with stimulating the students to take a very sympathetic interest in our problems, and it has cut down on the crabbing that used to consume so much of the student's time.

**PRESIDENT BLOEDORN**: Our faculty feels that the orientation course is decidedly worth while. As Dr. Peery indicated, we did reduce the course from two weeks to one week. That means just one week out of the freshman course, not out of the upper three classes. The freshman students had an opportunity to have a preview of the faculty. The transition from premedical school to medical school is rather a violent transition. The student is oriented or he could be oriented in premedical school, and that would apply particularly to our own university premedical schools. We have no access to the 600 odd premedical colleges which supply us with students. We could, as Dr. Wood indicated, indoctrinate our own premedical students, but, after all, most of the universities take the premedical students from other schools, and a relatively small proportion from their own premedical schools.

Some students come in after the first few days thoroughly disheartened and discouraged with the number of semester hours in the medical curriculum which no liberal arts college would tolerate. They begin at eight o'clock in the morning and wind up at sundown, work Saturdays and Sundays.

Much of the success of our course, I believe, was due to the enthusiasm of Dr. Peery, who enlisted the cooperation and aid of the faculty, and who selected his speakers with skill, and who aroused in them an enthusiasm for the course.

**DR. PEERY** (Closing): I wish to thank those who have taken part in the discussion for their interesting comments. I do not believe it would be wise for the orientation program to be departmentalized, with biochemistry giving an introduction to the course in biochemistry, and anatomy introducing its separate course. It seems to me that you have defeated part of the purpose of the program, and that is to give the student an over-all view of what lies ahead. Furthermore, if you do it on that basis, I am sure you will encounter the problem, which the Dean of Texas mentioned, that some departments will tend to actually begin their regular course during the time planned for orientation.

Dean Bloedorn has mentioned some of the problems that would be encountered if the orientation program were made a part of the premedical rather than the medical curriculum. I can add another argument against such a move. The students taking premedical courses so far outnumber those who will get into medical school, that it might be considered a waste of time to present the program to the larger group.

Dr. Carlson has indicated that orientation on a more informal basis than that proposed would be preferable. I would agree with him absolutely. But how many of the faculty actually approach the student for the first time on that basis and try to give him a broad point of view? More often, we think of our own course as we begin the instruction, and not the whole field of medicine and medical education.

I was quite interested in the points Dr. Darley had to make. I think his plan would be somewhat more effective in the state-supported medical schools than in those with private income. His plan would surely have its influence on the state legislature.

**PRESIDENT BLOEDORN**: Thank you, Dr. Peery.

## Public Health Service Aid to Medical Education and Research\*

C. J. VAN SLYKE

Director of the National Heart Institute, National Institutes of Health  
Bethesda, Maryland

The opportunity for presenting the provisions of the newly enacted National Heart Act to the members of the Association of American Medical Colleges is deeply appreciated. It is now two years since I was given a similar opportunity to present the then developing program of research grants of the National Institutes of Health before your annual meeting at Gulfport, Mississippi. Although prior commitments precluded a personal acceptance of that invitation, the presentation was made by Mr. Ernest M. Allen, Assistant Chief of the Division of Research Grants and Fellowships. As I wrote your President at that time, and would now repeat, we were delighted and stimulated both by your sympathetic consideration and by your attitude of splendid cooperation which has in no way abated in succeeding years.

It is of vital interest to all of us that the Public Health Service, in its program of aid to medical education and research, carried on through its several Institutes of Health, develop, with the medical schools, principles of operations and the closest working relationships.

As medical educators, you are interested in the specific objectives and scope of activities of each of the specialized Institutes, as well as in their interrelationships and in the aggregate effect on medical education and scientific progress. I should like, therefore, to review briefly certain of the common characteristics, objectives and principles of the Public Health Service as related to medical education, before concentrating on the provisions of the National Heart Act and operations of the National Heart Institute.

The basic policies which have guided the Public Health Service in aiding educational and research institutions have emerged during the past decade. Except for construction grants, the Cancer Act of 1937 embodied the patterns of aid which we are following today. Grants to institutions and individuals for research and training in the field of cancer were authorized. The Public Health Service Act of 1944 authorized grants and fellowships for research (but not for general training) in the entire health field. In 1946 the National Mental Health Act, and in 1948 the National Heart Act, established aid to trainees and teaching institutions to improve the numbers and quality of personnel in those special fields. The National Heart Act and an amendment to the Cancer Act now authorize construction grants for research facilities in heart disease and cancer.

These successive legislative enactments have provided general and special advisory councils which are responsible for generally advising the Surgeon Gen-

\*Read at the Fifty-ninth Annual Meeting of the Association of American Medical Colleges, held at White Sulphur Springs, W. Va., November 8-10, 1948.

eral on policies and procedures, and for recommending the specific institutions and projects which are to be aided with training, research, or construction funds. A prime consideration in the development of the legislation by the Congress, and in administration of the grants by the Surgeon General and the Councils, has been the safeguarding of academic freedom of the institutions and individuals receiving the grants. Constant effort has been made to assure the widest distribution of funds based on the quantitative and qualitative studies of the distribution of needs and resources. Limited funds have required the imposition of limitations on the magnitude of teaching grants to individual institutions in order to provide wider distribution. Continuity beyond the annual appropriation year for both training and research grants has recently been accepted and with the full support of both the Budget Bureau and the Congress we are developing this principle to provide a sound basis for the forward planning of the medical schools and other institutions receiving aid.

The programs of the various Institutes of Health give both direct and indirect support to medical education. Direct financial aid is rendered by means of teaching and construction grants. Less direct, but nevertheless significant, support is available through research grants, fellowships and traineeships. The last two types of aid are important in building up resources of qualified personnel to meet growing staffing needs of medical schools. The various types of aid may be described briefly as follows:

1. *Teaching* grants have been established to initiate, expand and improve teaching in selected fields. These fields include cancer, heart disease, dentistry and mental health.

2. *Construction* grants are provided to assist institutions in securing the physical plant required to develop effective programs of research in fields of cancer and cardiology.

3. *Research* grant funds are appropriated for support of research in medical and allied fields for which institutional funds are not adequate. These funds have been made available to encourage investigators to undertake research in neglected areas. Each Institute receives appropriations for this purpose.

4. *Research Fellowships* for the support of individuals are designed to develop research personnel and bring to bear the efforts of mature research workers on special problems. Funds are available for support of fellowships under each of the Institutes.

5. *Traineeships* are established to extend individual opportunities for post-graduate clinical training to increase the number of specialists in selected fields, and improve the competence of general practitioners in these fields. In mental health, this principle has been expanded to include training of ancillary personnel.

The following amounts are available in the current fiscal year to support these activities:

Fellowships	\$ 1,300,000	Research	\$11,022,000
Traineeships	\$ 1,755,000	Construction	\$ 8,000,000
Teaching	\$ 2,350,000	Total	\$24,427,000

Most available funds have been allocated to medical teaching institutions. Of a total of \$14,240,009 approved since July 1, 1948, for various types of grants, \$11,953,451 (83.94%) was allocated to medical schools. Of the latter amount, \$4,952,447 was for research, \$268,828 for undergraduate teaching in cancer, and \$6,122,479 for construction of cancer research facilities.

The National Heart Institute, in general, will apply these policies and principles of operation to the field of cardiology.

The National Heart Act became law on June 16, 1948. A few days later \$500,000 was appropriated for the establishment of the National Heart Institute in the Public Health Service. Operation was initiated on August 1, 1948.

It is the responsibility of the National Advisory Heart Council to advise, consult with and make recommendations to the Surgeon General for carrying out the provisions of the Heart Act. This Council is composed of four ex-officio members, one each from the Army, Navy, Veterans Administration, and Public Health Service, and twelve appointed members, one-fourth of whom retire each year and are not eligible for reappointment until a year has elapsed since the end of his preceding term. Original appointments to the National Advisory Heart Council provide for staggering of terms and new members will be appointed for a period of four years.

The present membership of the National Advisory Heart Council is as follows:

Mr. James S. Adams  
Lazard Freres & Company  
New York, New York

Dr. C. A. Elvehjem  
Dean, Graduate Schools  
University of Wisconsin  
Madison, Wisconsin

Mr. Maurice Goldblatt  
Chicago, Illinois

Dr. Tinsley Harrison  
Southwestern Medical College  
Dallas, Texas

Dr. T. Duckett Jones  
Medical Director  
Helen Hay Whitney Foundation  
New York, New York

Mrs. Albert D. Lasker  
New York, New York

Colonel James S. Taylor (Army)  
Chief, Cardiovascular-Renal Section  
Walter Reed General Hospital  
Washington, D. C.

Mr. E. B. MacNaughton  
President, Oregonian Publishing Co.  
Portland, Oregon

Mr. Ernst Mahler  
Kimberly-Clark Corporation  
Neenah, Wisconsin

Dr. Irvine H. Page  
Director, Research Division  
Cleveland Clinic Foundation  
Cleveland, Ohio

Dr. B. O. Raulston  
Dean, Medical School  
University of Southern California  
Los Angeles, California

Dr. Paul D. White  
Massachusetts General Hospital  
Boston, Massachusetts

Mr. Albert J. Wolf, President  
Board of Trustees  
Touro Infirmary  
New Orleans, Louisiana

Dr. E. H. Cushing (Vet. Admin.)  
Dept. of Medicine and Surgery  
Veterans Administration  
Washington, D. C.

Dr. Leonard A. Scheele (Pub. Health Service) Surgeon General  
U. S. Public Health Service  
Washington, D. C.

Commander R. C. Parker, Jr. (Navy)  
U. S. Naval Hospital  
National Naval Medical Center  
Bethesda, Maryland

The following is a quotation from the National Heart Act:

"The purpose of this Act is to improve the health of the people of the United States through the conduct of researches, investigations, experiments, and demonstrations relating to the cause, prevention, and methods of diagnosis and treatment of diseases of the heart and circulation; assist and foster such researches and other activities by public and private agencies, and promote the coordination of all such researches and activities and the useful application of their results; provide training in matters relating to heart diseases, including refresher courses for physicians; and develop, and assist States and other agencies in the use of, the most effective methods of prevention, diagnosis and treatment of heart diseases."

Under the provisions of the National Heart Act the Surgeon General through the National Heart Institute and in cooperation with the National Advisory Heart Council shall

"establish an information center on research, prevention, diagnosis, and treatment of heart diseases, and collect and make available, through publications and other appropriate means, information as to, and the practical application of, research and other activities carried on pursuant to this part;

"secure from time to time, and for such periods as he deems advisable, the assistance and advice of persons from the United States or abroad who are experts in the field of heart disease . . ."

The National Heart Institute is also charged with establishing and maintaining research fellowships. I already have mentioned the responsibility of the Public Health Service for administering research fellowships in the medical sciences.

The National Heart Act also provides for the establishment and maintenance of traineeships in the cardiovascular field. This program is intended primarily to promote the training of young physicians in order that they may become competent in matters relating to the prevention, diagnosis and treatment of heart disease. Recommendations for the award of these traineeships are made by the National Heart Institute to the Surgeon General but the National Advisory Heart Council is responsible for determining the number of persons to hold such traineeships.

The National Heart Act provides for three types of grants, all of which require the recommendation of the National Advisory Heart Council. Research project grants provide support for investigations, and research construction grants provide funds for appropriate space in which additional cardiovascular research can be carried out. The third type of grant provides for strengthening and stimulating cardiovascular teaching. This teaching or training grant is intended for Medical Schools in support of their undergraduate and graduate teaching programs.

Deferred until the last has been mention of the intramural research program of the National Heart Institute. At the moment this is a very limited

endeavor because of lack of space. This limitation, however, will be very largely removed when the new Clinical Center, now in the process of construction on the grounds of the National Institutes of Health, is opened. At that time, and for the future, full advantage will be taken of that portion of the Heart Act which provides that the Surgeon General may

"make available research facilities of the Service to appropriate public authorities, and to health officials and scientists engaged in special studies related to the purposes of this part . . ."

Through support by Special Research Fellowships we may hope to bring together at the Clinical Center a continuing flow of specialists interested and versed in cardiovascular research. The resulting catalysis of ideas should go far to promoting effective research studies. In fact, the Clinical Center will then function fully as a part of a truly national endeavor in the battle of research against disease. The medical school administrators will hold in their hands the destiny of such a plan.

The problems which face medical education today are problems of finance and staffing. The present programs of the National Institutes of Health have been designed, in part, to meet these problems, as well as give support to essential research. Many problems remain, both pre-existing problems and those raised in the course of operation of these programs.

It has been a great privilege to present to you the major portions of the National Heart Act and certain considerations regarding the overall program of the National Institutes of Health as they relate to medical schools.

#### DISCUSSION

DR. W. P. DEARING (U. S. Public Health Service): On behalf of the Surgeon General I also express appreciation of your cooperation in arranging at the eleventh hour for Dr. Van Slyke to talk to you this morning. The Heart Institute, to implement the Heart Act, is the latest and one of the most important in a series of recent developments which Dr. Van Slyke has summarized. We feel that the most important consideration in the development of all special programs is the essential unity of approach in our relations with the medical schools, hospitals and other teaching institutions of the country.

As he has described to you, these developments have emphasized certain disease problems, cardiovascular disease and cancer and psychiatry, in particular, which in one way or another touch the entire field of medicine. Although we have sometimes been asked when we are going to put the body back together again, we feel that it is not necessary that it ever be fragmented at all, because we are interested, as you are, in the training of the whole doctor and in keeping him abreast and giving him the facilities with which to work.

A fine example of your attitude in this regard was the cooperation of your Executive Council last fall when we approached them for assistance and advice on a problem of allotting funds, limited funds, for aid in teaching psychiatry. It was a question of how many schools, what would be the minimum size of a usable grant, what terms, how much attention to pay to geographic distribution, and so on. Your Council stepped forward immediately and circularized its membership in order to give us answers and advice which we sought and needed to be able to proceed.

So that we may present to you a united approach, there have come to attend these three sessions, besides Dr. Van Slyke, Dr. Westermarck, from the Mental Hygiene Division

and Dr. Kaiser, from the National Cancer Institute, who are at hand for consultation and discussions and to answer any questions and give you any help they can in respect to their various programs.

The events of last Tuesday point up, more than we had expected even previously, the importance of a professional unity and understanding of the whole program and the problems of education and medical service in the country. We look for an increasing pressure to move in various directions, some, perhaps, in different directions, and even in all directions at once. It is, therefore, absolutely essential (and we are convinced we can do our part) that we work together and face our common problems with professional intelligence and imagination in order that our standards of education and service may not only be maintained but may be improved.

MR. MAURICE GOLDBLATT (Chicago, Illinois): It is a real privilege to have the opportunity to talk to what I consider key men. It is my privilege to appear before many groups for discussions on research and this is the climax of all my appearances, to be able to talk to you.

About three years ago, I wanted to know the answer to the big questions—why and how? I have spoken to lay people and found that they were willing to give money for research but that they were not asked for it, or that they were asked by people who did not fully understand the situation. I have also appeared before the Senate and felt that they were ready to do everything possible.

This group here holds the key. Everyone I meet, including yourselves, knows that we should do a much greater job in research but the trouble is that we do a lot of wishing, a lot of dreaming and a lot of hoping, but we do not do anything. You are the gentlemen who can do this job. It will be at your request that the Heart Institute and the Board will do something. We cannot get the money for you if we do not get your requests for it. There was never yet a request made by any of your institutions as to how much money you will need for cancer research; however, the Heart Institute is adopting a procedure for such requests. They have recently asked you how much money you will need to do a job on heart research; this request is in your possession right now.

I feel that each and every one of you should read very carefully the by-laws of the new Heart Institute. You will find that there are no strings attached to it; you will also find that it provides for everything you will want to do.

The next thing I would like to ask of you is to support the new Heart drive by the American Heart Association, which is coming this Fall. You can get together with your doctors and impress on them what a great help they can be in assisting you to raise funds for this great job. The Heart drive, this year, is so important; we cannot have the Government provide all of the money. It is you who should get together with the Trustees and Presidents of your Universities and make them understand that it is their duty to raise money for Heart and Cancer research, so that all the money should not have to come from the Government. They will not do it if you do not provide the plans. It is your duty to sit down and formulate your plans for this year and next year. If you will do that, you will get the money. I know that no one is more anxious to do a greater job on the No. 1 and No. 2 enemies than you are.



## The Mississippi Medical Education Program\*

D. S. PANKRATZ

Dean University of Mississippi School of Medicine  
Chairman of the Medical Education Board  
University, Mississippi

I wish to tell you what the Mississippi Medical Education program means, not only to Mississippi, but to all those interested in obtaining more doctors for certain areas and in helping deserving medical students to enter this field of service.

Too often, we in Mississippi see, hear and read references to our state as forty-eighth in one category or another. This has been and is yet all too true in certain fields and instances. But in this field of getting doctors for rural areas by assisting medical students to meet the costs of their training, Mississippi is first.

Other states are following Mississippi's lead. With state funds North Carolina and Virginia have established similar programs. Sponsored by State Medical Associations, programs of this type are now operating in Indiana Illinois, Kentucky and several other states. Nebraska is hoping to set up this type of program by means of a fund now being raised by public subscription. Many or all of these groups have consulted our staff for information and assistance in this work.

For some years prior to the passing of the legislation authorizing this program, the number of doctors in Mississippi had been declining. World War II did not change the statistics much except to make a bad situation worse. With the return of doctors from military service, Mississippi still found itself with an inadequate number of physicians for the population of the state. Mississippi has one active practitioner for approximately 2,000 persons, using United States Army methods of computation, that is, adding one-half of our doctors over 60 years of age and all of the physicians under 60 years of age. In the sections classified as rural areas, according to House Bill 431 authorizing our loan program, there is one active physician for approximately 2,500 persons. According to House Bill 431, a rural area is a town or area with a population of 5,000 or less.

The age of many Mississippi physicians accounts for the high death rate in our physician population. Between January and May, 1948, Mississippi lost one doctor per week by death,—23 doctors in 22 weeks! You may better understand the reasons for this high death rate when I tell you that almost one-half of Mississippi's present physicians are over 60 while over one-half of the rural physicians of the state are past 60 years of age. In the period July 1, 1947-July 1, 1948, the net increase in the number of Mississippi physicians was 17.

In Mississippi there are only 23 towns of more than 5,000 population. In these 23 towns live almost one-half of the state's physicians.

\*Delivered at the Fifty-ninth Annual Meeting of the Association of American Medical Colleges, held in White Sulphur Springs, West Virginia, November 8-10, 1948.

Mississippi has 53 Negro physicians, according to the latest statistics available. According to the 1940 Federal Census, Mississippi has a Negro population of 1,074,578. You can see that we need many more physicians of the Negro race. Of the 53 Negro physicians now in the state, less than a dozen are located in rural areas of 5,000 population or less. The Delta section, in which lives a large portion of the state's Negro population, claims less than 20 of the 53 Negro physicians.

To the state of Mississippi then, the program offers a practical workable means of obtaining doctors for the rural areas. To the student who is a Mississippian and who is willing to sign our state contract, this program offers an opportunity such as is offered to few other students in America today—opportunity to serve both their fellow citizen and themselves.

Under the legislation authorizing this program, which was established in 1946, any Mississippian, man or woman, may apply for a loan not to exceed \$1,250 per school year, including tuition payable direct to the school, or a maximum of \$5,000 in four years. Veterans receiving tuition and subsistence payments under the GI Bill of Rights are eligible for loans of from \$500 to \$1,000 per year. Loans carry 4 per cent interest.

The basic requirements are: (1) Need of funds to complete medical education. (2) Completion of premedical college work and an acceptance for admission to an approved medical school. (3) Willingness to sign state contract to return, upon completion of a general rotating internship, to a rural area approved by the State Medical Education Board, to remain there for a minimum period of two years, regardless of the amount borrowed. Loan is discounted at one-fifth of the student's total loan per year, the amount varying according to the total amount borrowed by the individual. If a physician remains in an approved rural area for five years the entire amount plus the interest thereon is credited to him. If he chooses to leave such an area or the state at the end of two years he may pay off three-fifths of his loan with which he has not been credited, plus interest, and be free of contract obligations. All recipients of loans are obligated for a minimum period of service of two years.

The State Medical Education Board charged with the just administration of this program is composed of the Dean of the University of Mississippi School of Medicine, who serves as Chairman of the Board by virtue of his office; the Executive Officer of the Mississippi State Board of Health, who serves as a member of the Board by virtue of his office and whom Board members elected as Vice Chairman; the President of the Mississippi State Medical Association, serving also by virtue of his office during his one year term; and two members appointed by the Governor for four year terms.

As a result of these state medical education loans, 148 men and women of Mississippi have received benefits to date. This is a carefully picked group, selected from approximately 900 inquiries and applications. These students have come from 63 of the 82 counties of our state and many are still resident in their home county.

Of this group, 105, or 72 per cent, are veterans of World War II. Eleven participants are women. Twelve are Negroes, one of whom is a woman.

These students are attending 23 medical schools throughout the nation. The largest group is enrolled at the University of Mississippi School of Medicine, next largest at the Tulane University of Louisiana School of Medicine. Other schools are:

University of Arkansas School of Medicine  
 Baylor University College of Medicine  
 Bowman Gray School of Medicine  
 Columbia University College of Physicians and Surgeons  
 Emory University School of Medicine  
 George Washington University School of Medicine  
 Harvard Medical School  
 University of Illinois College of Medicine  
 Jefferson Medical College  
 Johns Hopkins University School of Medicine  
 Louisiana State University School of Medicine  
 Northwestern University Medical School  
 Southwestern Medical College  
 St. Louis University School of Medicine  
 University of Tennessee College of Medicine  
 Vanderbilt University School of Medicine  
 University of Virginia Department of Medicine  
 Washington University School of Medicine  
 Western Reserve University School of Medicine  
 Howard University College of Medicine  
 Meharry Medical College

The first young physician returned to practice last November. Two more are now in practice, while seven are now serving their internships.

These are the only additional young physicians of whom the State of Mississippi can be sure, for these are the only Mississippi medical students who have signed state contracts to return to rural areas of the state for practice.

We feel that the leaders of our legislature in 1946 were farsighted and progressive in establishing this program. Honorable Walter Sillers, Speaker of the Mississippi House of Representatives, conceived the idea and wrote the bill for the Mississippi State Medical Education Scholarships.

We are glad that Mississippi has been the first to take concrete steps to meet a problem which faces the rural areas of our entire nation.

#### DISCUSSION

DR. W. C. DAVISON (Duke University): One of our greatest problems is getting general practitioners for rural areas. It was pointed out years ago, by Dr. Pusey and Dr. Hyman, that to get country doctors, we must have country students. The city boys will not go to the country. I think the Mississippi program is attacking the problem in the right place by helping the students from the country to get a medical education, on their promise of spending two years in country medical practice, and with the hope that they will remain longer.

DR. M. E. LAPHAM (Tulane University): The Commonwealth Fund subsidized an undergraduate fellowship program for Mississippi boys at Tulane for about ten years. It was concluded at the end of that time that too few of the students were returning to Mississippi, particularly to places in Mississippi where we had hoped they would go. It seemed to us also that we were obligating students of 18 or 19 years of age to do something which they would be reluctant to do six or eight years hence. Many students not obligated by contract change their minds regarding the type of practice they desire to pursue. It was our recommendation, therefore, that

this form of scholarship be discontinued and that the subsidy of students at a later period, during internship or residency, would be more apt to secure students to return to the part of the country where they were needed. I believe the Mississippi State program of scholarships is progressing well at the present time and may be the answer to a better distribution of medical service. I am sure that Mississippi is going to be able to get many more students to return to the areas where they are needed than we did under the Commonwealth Fund program.

**DR. WM. H. PERKINS** (Jefferson Medical College): I was on the Selections Committee at Tulane for a number of years, and I do not think it is particularly a question of the men being from the larger towns or cities. We chose them pretty well from the rural areas. I think Dr. Lapham is more nearly correct when he says it was the age at which they had to make up their minds where they would want to practice. Very few of them actually knew, after having been in New Orleans, where they would like to settle down. The reasonable thought we had in regard to it, then, was that probably a later selection, even up to the end of the second year of medicine, might have been more conducive to getting those men who would look forward to rural practice instead of staying around the larger cities.

**DR. ERNEST W. GOODPASTURE** (Vanderbilt University): Certain criticisms have come to my attention with reference to the program of the Commonwealth Fund in making available similar scholarships. I hope that Mississippi will succeed in this program. I hope that they will be able, however, to eliminate the disadvantages that became manifest in the allocation of some of the Commonwealth Fellowships. The main disadvantage has already been mentioned, namely, that a commitment is made by a young man before, in many instances at least, he has determined just what he wants in his medical career, and before he knows what the opportunities are. If the students do change their minds and desire a different type of training, their situation is difficult. But this is a difficulty that can be eliminated by the proper selection of people, or by proper "escape" provisions.

I feel that the granting of a subsidy or scholarship, after a man has had his medical training, preferably after he has had his internship, would be a better arrangement. Whether the proper mechanism has been worked out or not, I do not know. I hope Mississippi will work it out satisfactorily. It is interesting that 148 students have chosen to serve in this manner. I think that the problem is not insoluble, and these Mississippi experiments are beneficial. Sooner or later, some arrangement can be made for serving rural areas so greatly needed in the South, and perhaps in other parts of the nation.

**DR. K. M. LYNCH** (Medical College of the State of South Carolina): Our last General Assembly established scholarships of a similar kind, distributed geographically in the state, and some in the state at large, offering the different feature, that the loan could be repaid in money if the beneficiary should decide later that he would like to be relieved of that contract.

I assume that that is the point to which some of the remarks made have been directed. It is not a rigid requirement that the service must be carried out. There is this remarkable difference with us in the actual happenings in the program. This has been available since before the last admitted class was selected, and is available to those of the upper classes as well. In spite of the fact it was available some months before the opening of the regular session in September, we have not had a single application.

What that may mean we have yet to learn. We have not promoted the program actively; we have simply made it available. Perhaps, promotion would bring some applications in. Whether or not to attempt to argue them into securing such help for such returns is something of a question in my mind.

**DR. DWIGHT O'HARA** (Tufts College Medical School): We also administered a block of the Commonwealth Fund scholarships, and I think we had about the same

experience as was had at Vanderbilt and Tulane. We made plenty of errors in selection. After we followed the thing through, it was decided that we could probably have selected them better if we had not had to select them in advance of our own experience with them as students. If we could have selected them at the beginning of our third year, instead of before they ever came to medical school, we thought we might have done a little better job. In looking back over it now, I have a distinct impression that those who stuck in a rural location were the individuals who had carefully studied that location in advance, and, therefore, they found themselves in what was economically a more advantageous position. I would suggest that any supervision that can be brought to bear on the selection of the location in which the man is going to make his initial venture into general practice would be quite worth while.

DR. F. D. MURPHY (University of Kansas): I hesitate to let this discussion close without getting to what I think is, perhaps, the most important point of getting young men into rural areas. I accept in principle the fact that these men are frequently financially insolvent and need help. But when you actually talk to medical students and interns (and young men who are the ones you want to get into practice), you find that the major difficulty is not financial, but the fact that these young men are unwilling to practice without the tools of modern medicine.

With all due credit to the scholarship concept, I believe it is a sort of "academic bribery." The scholarship plan has assisted, but I think you have to provide the physical facilities locally, so that a young man knows, when he goes into a rural area, that he has the tools with which to practice modern medicine. Secondly, I think you have to guarantee a young man that he will not become medically isolated. It is perfectly true that many of these boys who go back to the rural areas are boys who come from small towns. That is, in one sense, an advantage, and, in another sense, it is a very distinct disadvantage, because those young men and women have seen—and we must be realistic about it—what has happened to doctors who have gone into remote rural areas without the benefit of being able to maintain their professional excellence, and boy after boy has come to me and said, "I am unwilling to go to an area where I feel that I shall go to seed academically."

We, in Kansas, are confronted with exactly the same problem that any rural state in this country has today. More than eighty Kansas communities have come to us and said, "How in the world can we get doctors?" We have said, "If you are willing to put up \$15,000 or \$20,000 to provide these young men with office facilities and equipment, and set up a reasonable amortization, preferably without interest, so the young men can buy these tools without compounding an already existing debt; and if we can guarantee, by means of an expanded program of postgraduate medical education, including not only refresher and circuit courses, but, above all, the opportunity for the men in general practice to return to the medical center from time to time on an in-resident basis, then, we feel that we can guarantee you a good doctor doing a good job."

I have a feeling that somewhere along the line the scholarship plan must be invoked, but that a plan to resolve rural health on the basis of scholarships primarily is ultimately doomed to failure, because you have frequently placed a man who is unhappy because he has been trained to use certain tools, and suddenly finds he does not have them. You are certainly not benefiting the community as much as if you gave the man reasonable diagnostic and therapeutic tools. So I am wondering if the problem of rural health,—and our statistics are very much like yours,—is not going to be resolved on the basis of a multi-pronged program, only one prong of which is the scholarship portion.

DR. R. H. YOUNG (University of Utah): I am quite in agreement with Dr. Lapham and Dr. Goodpasture as far as the philosophy of scholarships for rural education is concerned. I should like to speak as a taxpayer of a state supported medical college. The scholarship programs, as set up by the state of Mississippi provide to the cooperating school tuition only. I think that a very serious defect in the program is that the state of Mississippi does not cover the cost of education over and above the student

fees, and I think the states advocating such a program are skipping some of their obligations as far as the financing of medical education is concerned. Why should the taxpayers of the state of Utah pay the differential between the tuition and the actual cost of educating a student from the state of Mississippi or any other state with a similar scholarship program?

**DR. PANKRATZ (Closing):** Mississippi is trying its best to do some of the things Dean Murphy was talking about. In fact, many communities have gone out on their own and built a clinic and have written to our Medical Education Board and to the Public Health Department begging for some more physicians to come out and practice. Another point that was brought out—we might let them practice in twos. If a county is short on doctors, two men can practice together. In fact, we are planning a setup like that right now for two young graduates from similar institutions who would like to have a clinic together. The county needs warrant such an arrangement so we will approve those two young men to go there and practice together.

We do not coerce anyone into using the scholarship. As a matter of fact, we try to keep a student from accepting it if we have any feeling that there is any doubt about his wanting to live up to the contract. Attorney Rice's office and the Board work closely together on this matter of executing the contracts.

As a last resort, a man can pay back the money that he has borrowed, with 4 per cent interest, but only by breaking his contract and failing his obligation. We do not advertise that side of the program.

A few men can and may go to larger areas, not over 25 per cent of the total. We are going to select those men. That also is a function of the Board. And we do not want them to become isolated. That is why Dr. Galloway, who is in charge of our Mississippi hospital program, and Dr. Bachmeyer, who was in our state to assist him, made a survey of the needs of hospitals and the areas to be served. We are moving in that direction, too, but I was reporting on our scholarship side of it.

This is one way of meeting the situation. We have a fairly good system of highways in Mississippi now so that no young man needs to become entirely isolated. I have gone to smaller areas and consulted with groups of petitioners who wanted a doctor and told them, "Now you build a clinic for this young man, and I will try to find you someone who will come and practice here." That practice could be in close connection with a hospital that is already established ten miles or so away on a good highway and with direct telephone connections.

We offer more than scholarships in our State at present. Another point is that the young physician educated through this program may move from one approved area to another if he cares to. He does not have to stay in that one area for which we originally approved him. Doctor Underwood, who is on our Board, had a good bit of experience with the Commonwealth Fund. There is one marked difference in this program. More than fifty per cent of our awardees are married and many have married into rural communities. You know that where a man marries has a lot to do with where he is going to settle and practice some day.

If your experience is like ours, the average age of the medical student in the schools today is in the 20's. These GI's who are studying medicine now, I believe average about 25 in age. We do not take only freshmen. We have practically as many juniors on our scholarships. Those men are willing to accept this contract in their junior or senior year. I think that will meet one of your criticisms. Those are the men who are out in practice right now and are doing quite well.

Maybe Kansas does not need the financial support,—or was it South Carolina? Maybe they are better off than we are in Mississippi, but our students do need financial support, and the \$1,250 a year is more than tuition. In some of the states that is much more than tuition. We send the student a check every month in addition to that tuition, which he can use as he pleases. Then, when you give a married GI with two children \$1,000, plus his GI rights, he has a fair subsistence for his medical education.



## The Medical School and National Health\*

LEONARD A. SCHEELLE

Surgeon General, U. S. Public Health Service  
Washington, D. C.

No one in this medical convocation will credit me with unusual professional acumen when I say that one hundred and twenty-five years is a ripe old age for any living organism.

The George Washington University School of Medicine, however, does excite medical curiosity, because it has reached that age without any signs of aging. No hardening of the arteries, no hypertension, no evidence of senile dementia. Instead, the school retains all the faculties of growth and development that one finds in the first years of life, and it appears to be determined to exercise those faculties for many years to come.

We in the United States Public Health Service are especially happy to congratulate the Dean and faculty, the alumni and student body of George Washington University's medical school on this particular anniversary. As an elder brother, we can tell you that "The first hundred and fifty years are the hardest." As you may know, the Public Health Service is celebrating its one hundred and fiftieth anniversary this year.

We started life, as your school did, under another name. The United States Marine Hospital Service was established in 1798—about 27 years before the Columbian College Medical Department held its first opening session.

Members of the School of Medicine and the Public Health Service can take special pride in the longevity of our institutions, because there have been periods in American history when the mortality among medical colleges and federal establishments has been very high. Your school and our agency have weathered the storms and crises in national life and remain—one of the oldest medical colleges and one of the oldest federal agencies in the United States.

The American people owe so much to the Nation's medical schools—and yet, the debt is not often recognized. Only through the men and women trained in our medical schools can the people of this country receive the benefits of modern science in medicine, public health, and related fields. The medical school, thus, provides the very backbone, hands, and brains of national health. Medical and hospital care, public health services, and medical science turn to the medical schools as the chief sources of qualified personnel, as the primary centers of training, and research.

When an individual seeks medical care, however, or enters a hospital, or calls upon his health department he takes for granted that his community will offer the highest quality of service in each of these fields. He seldom realizes that these services are available only because medical education has made them

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possible. He seldom realizes that the medical school is just as much an essential institution as is the public school, the college of arts and sciences, the hospital, and the church.

No plans for the promotion of national health can be successful unless they take account of the fundamental place of the medical school. In the development of the cancer control program of the Public Health Service, for example, the medical school is the center for the improvement of training in the diagnosis and treatment of cancer, and for the expansion of cancer detection centers. The establishment of such a center in the George Washington University School of Medicine this year, illustrates the relation of the medical school and national health. More than in the past, this relation must be strengthened and increased, for the major public health problems of our age are the problems of our aging population. Chronic degenerative diseases and long-term illnesses, such as mental disease and tuberculosis, require a new approach to prevention and control—namely, diagnosis and treatment, using more elaborate facilities and more highly skilled personnel than are necessary for the prevention—let us say—of smallpox or diphtheria, major problems of by-gone years.

The association of medical education with local, State, and Federal Governments dates from the establishment of general hospitals where the students of the young medical schools could obtain clinical training. The Pennsylvania Hospital, opened in 1752, became the teaching hospital for students of the oldest medical school in the country—University of Pennsylvania. That school, you will recall, was the alma mater of Doctor James Staughton, co-founder of the precursor of George Washington School of Medicine. Pennsylvania Hospital was a joint project of the Colonial Government and private philanthropists, under the leadership of Benjamin Franklin; and its support was derived in part from tax funds for the care of the sick poor.

The United States Marine Hospital at Boston was the first "teaching hospital" of the Harvard Medical School, and is the fourth oldest hospital in the United States. The relationship of hospitals with early medical education, is described in a letter, dated February 9th, 1803, by the famous Doctor Benjamin Waterhouse, Professor of Theory and Practice of Physic at the Harvard Medical School and one-time physician in charge of the Boston Marine Hospital.

Doctor Waterhouse wrote: "A few years since, when we were arranging our military matters and of course appointing surgeons for the Army and Navy, a very considerable proportion applied to me for certificates of recommendation for these stations. Most of the applicants were young men who went from school into college where, in the last part of their year, they read a few books on medicine and attended a course of our lectures, then lived perhaps a year or two with some country practitioner; but most of them never saw an amputation, the operation of trepanning; and some of them, not even the reduction of a broken or dislocated bone. As to fevers and the common diseases of seamen and soldiers, (that) was a knowledge they had yet to acquire. They and their connections were, nevertheless, much disappointed and hurt at my hesitating to declare in writing that I deemed them qualified to take the charge of the health

of two or three hundred men at sea. . . . Such recommendations (as I could give) only meant the best we had, but the very best was, in my opinion, inferior to a surgeon's mate in a British Frigate."

Doctor Waterhouse, who, you may recall, introduced Jenner's method of vaccination into this country, had spent two years before the Revolution at one of England's marine hospitals. For the operation of the Boston Marine Hospital, he planned "to introduce pupils of physic and surgery to the bedside of the sick and to all important chirurgical operations, subjected to all those good and wholesome rules established in European hospitals; and to give a set of clinical lectures comprehending what may be called extemporaneous practice of physic and surgery, and also a short course of lectures on the most approved mode of preserving the health of seamen."

While in charge of our hospital Doctor Waterhouse thus carried out the ideas he had expressed on paper a few years earlier. He started an outpatient service for minor ailments and injuries, and kept "a senior pupil, or a well-instructed young medical gentleman, constantly residing night and day" in the hospital. The hospital at Boston was used as a teaching facility until the establishment of Massachusetts General Hospital.

The Washington Infirmary, this medical school's first teaching hospital and the first general hospital in the Nation's capital, also was created through the joint efforts of private philanthropists, medical educators, and the Government. The use of a poor house and insane asylum—which the Congress permitted in 1844—is a far cry from the development, a century later, of a great medical center, under the leadership of George Washington University, and with financial support from Congress. Nevertheless, it is, I believe, an example of the peculiar genius of the people of the United States to combine professional, voluntary, and public resources for the common good. And the history of this institution shows that this genius, this pattern for the improvement of national health is deeply rooted in our democracy.

The United States Public Health Service for many years has had a close and fruitful relationship with George Washington University School of Medicine. Many of our physicians have served on the faculty, and many graduates have entered the Public Health Service.

At the present time, there are ten graduates of George Washington in the active regular corps of the Public Health Service, nine of whom graduated in classes of 1934 to 1946. I am sure that members of the faculty and many of the students will remember these young men, all of whom are doing creditable and interesting work.

Doctor Virgil Jackson Dorset, class of 1934, is the oldest of the group. Dorset spent three years in Japanese prisoner of war camps at Cabanatuan in the Philippines and in Japan. On duty with the Public Health Service in Manila when the Japanese attacked in 1941, Doctor Dorset and four brother officers volunteered for duty under General MacArthur. The Public Health Service gladly consented to this "temporary loan." Doctor Dorset was in charge

of a field hospital at Bataan, and went through that disastrous campaign to the end. During his imprisonment he cared for American and British comrades, often at personal risk and always under great difficulties. Doctor Dorset was awarded the Bronze Medal of the Army for his services. He is now on the staff of our Marine Hospital at Baltimore, Maryland.

Doctor Charles Spicknall, class of 1936, is Assistant Chief of Medical Service at the same hospital; and Doctor William Stimson, class of 1939, son of a Public Health Service officer, is also at Baltimore, now taking his second year residency in internal medicine.

Doctor Ray Howard, class of 1941, and Doctor Keith Farr, class of 1944, are at our largest general hospital, serving the port of New York, at Stapleton, Staten Island. Both are taking residencies in surgery. Doctor Raymond W. Brown, class of 1943, is Chief of Surgery at the Medical Center for Federal Prisoners at Springfield, Missouri, where he is doing excellent work. He has been promised a residency beginning next July.

Doctor Stuart Mattel, class of 1945, is taking his second year residency in internal medicine at the Marine Hospital in Detroit, and Doctor Robert A. Mattingly, class of 1946, the youngest of our George Washington graduates, is doing good work on the staff of the hospital at Norfolk. As soon as possible, he too will be given an opportunity for residency.

Doctor William C. Jenkins, Jr., class of 1941, has chosen a field in which too few medical students are interested; that is, psychiatry. After preliminary training at our mental hospital in Fort Worth, Texas, during the war, Doctor Jenkins was awarded an 18-month fellowship for postgraduate training in psychiatry at the Colorado Psychopathic Hospital under Doctor Franklin Ebaugh. This training was planned and provided by the Public Health Service in connection with our over-all program of training for our professional personnel. Doctor Jenkins completed his fellowship this year, and is now mental health consultant at our District Office in Denver. He is taking some additional work with Doctor Ebaugh, and the Public Health Service intends to see to it that he gets all the help he needs to complete his requirements for a diplomate in psychiatry under the standards of the American specialty boards, including—if necessary—additional work in psychoanalysis.

I think it is worth remarking that such a high percentage of wartime graduates from this School of Medicine have gone so far already in their postgraduate training. The Public Health Service has developed in the past three years a broad program of in-service training for our commissioned officers, including fellowships, residency, and other postgraduate courses. This year, forty-seven officers—physicians, dentists, scientists, engineers, and nurses—are taking postgraduate work at twenty institutions, on fellowships lasting from six months to two years. And many more than these are taking shorter courses in a variety of subjects. The special fields of interest cover a wide range—as do the programs of the Public Health Service. Graduate work in public health is of the utmost importance, and our organization is committed to a policy of providing

such training in the nation's schools of public health for every officer who shows an interest and aptitude for preventive medicine and public health.

I have said that too few medical students are interested in psychiatry. The same is true of two other fields vital to national health—namely, scientific research, and preventive medicine and public health. The shortages of medical investigators and medical health officers are acute, not only in the programs of the Public Health Service, but in research institutions and health departments all over the country.

Although a large share of the fundamental research related to medicine is done in the graduate schools of basic science, the Nation looks to the medical school as the major source of research and training in medical and related sciences. Last spring, when I had the pleasure of addressing the Smith-Reed-Russell Society, I told the honor students of George Washington University School of Medicine that I hoped many of them would decide to go into research or preventive medicine and public health as a career. I do not object to being called a "repeater" when I tell the entire school in convocation the same thing. I believe that it must be said again—and again.

I venture to say that at no time in the history of our country has there been so great a need for the pioneering spirit. My organization and your school came into being in a period when physical and intellectual adventure was requisite for survival. I like to think of what Doctor Sewall said in his opening lecture:

"This is an era in the history of the world, when all institutions for the promotion of science, and the amelioration of the condition of man, are regarded with public favor, and sustained by a liberality of feeling known in no other age."

There are many similarities between that era and the one in which we live. The year that the Columbian College opened its doors, Napoleon died on St. Helena, and an age of incalculable strife came to an end in Europe. Two years later, 1823, President Monroe enunciated his famous doctrine, and the same year, the first steamboat went up the Mississippi River as far as Fort Snelling, Minnesota. The year Doctor Sewall gave his opening lecture—1825—the Erie Canal was opened. And one hundred years ago—1848—gold was discovered in California.

In our era, Europe has just come to the end of another long war, in which the whole world was involved. This time, the chances for enduring peace should be greater than at any other time in history. The general unrest that follows a great conflict often serves to stimulate the minds and spirits of those who seek "the promotion of science and the amelioration of the condition of man." What I am pointing out is: In any age, what goes on in the world around us has very important effects upon the science of medicine, whether the event be the opening up of a vast, rich continent or the practical use of atomic energy.

The steamboat up the Mississippi carried not only settlers and traders—it carried a challenge to medicine and public health, in the form of cholera and other epidemic diseases. The gold rush not only opened up the great western empire of the United States, it brought millions of new citizens to this country,

stimulated the building of railroads, the expansion of agriculture and manufacture, the growth of cities. Each advance challenged medicine and the medical schools of our country. So also today, the needs of a new society challenge medicine, medical education, and research.

There is every evidence that the public interest and support of medical science also is greater today than at any time in our history. Until the last few years, the United States neglected basic research upon which depends all applied science, including medical and related fields. The war brought home to us the fact that the entire fields of chemotherapy, antibiotics, radiology, and atomic fission (to say nothing of bacteriology) have been made possible by the fundamental discoveries of scientists in other countries. The destruction of scientific institutions in Europe sharpens our realization that for many years to come the United States will have to intensify its research for basic knowledge.

The major increase in support of medical research since the end of the war has come from the Federal Government, and the augmented funds have been expanded chiefly in the medical schools and teaching hospitals of the Nation. In the Public Health Service, research in the medical and related sciences is a major program, centered in the National Institutes of Health. In 1939, our support of research in non-governmental institutions consisted of two or three hundred thousand dollars for cancer research. This year, the National Institutes of Health will spend approximately 20 million dollars in research grants and fellowships, covering the entire range of basic and applied sciences in studies related to medicine and public health. The major share of that sum will be expended in medical schools.

Certainly there is no greater challenge to intellectual and social pioneering in our age than research and preventive medicine. Few medical specialties have, as yet, had an opportunity to deal, as a matter of course, with healthy patients, for people seldom turn to the physician until they are ill. The notable exception, of course, is pediatrics; care of the infant and child is a continuous process of preventive medicine. As a result of the pediatrician's concept of care for the whole child, we now know more about the normal healthy processes in man's earliest years than in any other of his "seven ages." In the future, we should look for comparable knowledge and preventive care of older persons.

There is no doubt that the medical schools and hospitals of the Nation will produce most of the scientists and a large share of the new knowledge needed for national health in the Atomic Age. One of the encouraging signs of the times is the medical center of the future, such as George Washington University is developing here in the Nation's Capital, with your fine new hospital and your splendid traditions of research, training, and service—all of the highest quality. The whole community will look confidently to the officers, faculty, professional staff, and student body of the George Washington University School of Medicine for the greater service which this institution is so eager, so well prepared to give.

## University Instruction in Toxicology

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During the latter half of 1947, a questionnaire was sent to the heads of pharmacology departments of 72 approved medical schools in the United States. This questionnaire had for its stated purpose the gathering of information concerning the teaching of toxicology in the university, particularly in professional schools. Answers were received from 57 pharmacology departments and the following report is based on a discussion of the information obtained.

The subject matter was covered by six main headings. These were: (1) the position of toxicology in the university curriculum; (2) the number of hours devoted to the teaching of toxicology; (3) subject matter covered in the course in the medical school; (4) instruction in toxicology in related courses; (5) the availability of instruction to nonmedical students; (6) an evaluation of the present teaching methods and the time allotted. All questions were made as objective as possible and it was intended that they be answered by affirmation, negation or the stating of a number.

A summary of the answers to the questionnaire is presented in Table 1. The questions appear to the left and a breakdown of the answers appears opposite the question in the right hand columns. Not all of the questions were answered in all the questionnaires. The usual explanation included in the accompanying letter was that the writer did not feel that he could answer specifically the question as it was stated, or that he felt that it did not pertain to the teaching of toxicology in his department. The questions which can be answered either "yes" or "no" should total 57, as should those questions which require a numerical response. In order that the numerical response should not be misleading, a range is stated for each of the figures together with the mean value and the number of schools answering the particular question.

TABLE 1.

	Schools Responding	Average	Range	Yes	No
Is instruction in toxicology presented as part of the pharmacology course?	57			57	0
As a separate subject in the curriculum?	8			7	1
In one of the other schools in the University?	33			9	24
Not at all?	8			0	8
If the answer to 2 or 3 is "Yes," are lectures also included in the pharmacology course?	6			6	0
As an elective?	6			6	
As a required subject?	10			10	
How many lecture hours are devoted to toxicology?	47	9 hrs.	3-22 hrs.		
What per cent of the total lecture hours of pharmacology and toxicology does this comprise?	47	12½%	2-30%		
Is laboratory work offered?	50			37	13
How many hours of lab. work?	41	10 hrs.	0-25 hrs.		

What per cent of the total laboratory hours does this comprise?	36	10%	0-25%		
How many hours of lectures?	11	16 hrs.	12-36 hrs.		
Is laboratory work offered?	11			6	5
How many hours?	7	33 hrs.	2-66 hrs.		
What per cent of total time allotted to toxicology is devoted to toxic effects of drugs?	48	30%	5-50%		
Chemical identification of poisons?	48	8%	0-60%		
Industrial toxicology?	48	16%	0-90%		
Treatment of poisoning?	48	26%	0-80%		
Mechanism of action of toxic substances?	48	18%	0-33%		
Others?	48	2%	0-33%		
Are courses available to the medical students in industrial hygiene?	42			25 } 20 R 5 E	17
Occupational medicine?	38			20 } 16 R 4 E	18
Legal medicine?	48			35 } 26 R 9 E	8
Special courses in analytical chemistry?	37			9 } 1 R 8 E	28
Any other courses where instruction is given in toxicology?	0				
How many hours are available to medical students for attending the elective classes?	18		0-1/2 of currie		
How many hours are devoted to each of the required courses?	20		4-42		
Are lectures in toxicology available to students in pharmacy?	28			13	15
Public health?	28			12	16
Criminology?	23			8	15
Graduate students in allied medical sciences?	42			33	9
Any other group of students? Specify.	16			5	11
Do you feel the present time devoted to toxicology is:					
Sufficient?	53			23	20
Excessive?	8			3	
Insufficient?	53			20	38

## DISCUSSION OF THE FINDINGS

All of the pharmacology departments stated that toxicology was taught as a part of the pharmacology course. In only seven medical schools, or approximately 13 per cent of the schools which responded, was toxicology listed as a separate course in the medical curriculum. In two of these curricula, it was a required course and in five it was an elective. Apparently it is the general feeling that toxicology is adequately covered by the emphasis given to it in the course of pharmacology.

Nine departments replied that toxicology was also taught in one of the other schools in the university. Seven of these nine departments stated that instruction was offered by a member of the pharmacy staff, one department stated that instruction was offered in the chemistry curriculum, and one did not specify the school.

The majority of the replies did not refer to question 4 since the answer was already given in the affirmative in the first question.

Of the 16 replies which signified that toxicology was taught apart from the pharmacology course, all indicated that lectures were also included in the course in pharmacology. Since it had already been indicated that toxicology was an additional required subject in only two of the medical curricula, it is



evident that in those universities where toxicology was also offered in the school of pharmacy, it was usually presented as a required course.

The hours of lecture and laboratory instruction which were offered by the different pharmacology departments varied considerably, but approximately 12½ of the lecture hours and 10 per cent of the laboratory hours are devoted to subject matter of a toxicologic nature. Nine persons reported that they were unable to answer questions concerning the hours of laboratory and lecture instruction. The explanation was given that because of the necessity of presenting the toxicology of each pharmacologic agent at the same time that its therapeutic effects were discussed no differentiation of time was possible.

Separate courses in toxicology are relatively short, averaging only sixteen hours of lecture time. In only six of the schools is it indicated that laboratory work is offered when toxicology is taught separately. Again, these laboratories are brief, occupying only an average of 33 hours.

The question concerning the subject matter divided the material presented into five categories, with the opportunity for noting other topics of discussion in a sixth general classification. Apparently the subject matter covered is fairly consistent throughout most of the medical schools, since the replies showed that 98 per cent of the time allotted to toxicology was divided among these five subdivisions. The variation in time allotted any of the subdivisions was wide. This is undoubtedly determined by the extent of supplemental courses in legal and industrial medicine as well as by the individual instructor's personal interest.

A discussion of the toxic effect of drugs received a proportionately greater amount of time than did any other subject of toxicologic interest. This finding supports the comments of those reporting the need for presenting the toxic effect of an agent at the same time as its therapeutic effects are discussed. The subject receiving the second greatest amount of attention was the treatment of poisoning. It was noted by five departments that this subject was presented also in the course in medicine during the discussion of the treatment of medical emergencies. The mechanism of action of toxic substances and industrial toxicology accounted for the majority of the remainder of the time. In one school the latter topic composed 90 per cent of the material presented. Other subjects which were considered under instruction in toxicology were: detoxication mechanisms, economic poisons, preparation of specimens for forensic analysis, and war gases.

Failure on the part of some to answer the questions 22-28 concerning instructions in related fields may have been due in part to a lack of familiarity by the pharmacology staff with the material presented in other departments in their schools. Moreover, the data are not as likely to be accurate as are the answers based on personal experience. While 20 of the 25 courses in industrial hygiene and 16 of the 20 courses in industrial medicine were required, the total coverage of these subjects throughout the medical schools is not as great as might be hoped, seventeen of the courses in industrial hygiene were given in schools also presenting the materials in occupational medicine. Approximately one-fourth of the medical schools were covering these subjects very well, but the majority were giving little or no instruction in this field.

Additional instruction in some aspects of toxicology was available in legal medicine in 35 of the 44 schools answering this question; but in 26 only was the course required. This would indicate that, again, rather important aspects of toxicology were being neglected.

It is interesting that the time available for attendance at elective courses ranges from zero to about one-third of the curriculum.

Instruction in toxicology was offered by 19 of the pharmacology departments to students in one or more of the following nonmedical majors: pharmacy, public health and criminology. Thirteen departments accepted pharmacy students for instruction. Twelve departments accepted public health graduates, while only eight permitted criminology majors to attend lectures. This small number of undergraduate students receiving instruction was due in many instances to the location of the medical school at a point apart from the main university campus or to the absence of any such school in connection with the medical school. Twenty schools replied that students in these majors were not accepted in the course in pharmacology and toxicology. Thirty-three of the schools stated that graduate students were permitted to attend classes, while nine stated that they were not permitted. Five of these schools qualified their statements by admitting that there was no graduate school in connection with their institution. Among the other groups of students who received instruction in toxicology by members of the pharmacology staff were chemistry majors, chemical engineers, "fellows," nurses and special students.

In the evaluation of the time devoted to toxicology, 33 of the departments indicated that the time was sufficient, 20 stated that it was insufficient, and three felt that the time now allotted by their departments was excessive.

The suggestions made concerning the allotted time reflected the individual instructor's attitude toward the presentation of the subject matter in his institution. Only three persons ventured comments upon teaching methods employed elsewhere. It was concluded by them that too little time was devoted to the subject in other institutions. Suggestions varied from the proposal that the majority of toxicology be taught apart from the pharmacology course to the remarks by one that the two hours presently assigned for consideration of the toxic gases, heavy metals and forensic toxicology was more than enough.

#### SUMMARY

I. In the majority of the medical schools, toxicology was taught exclusively in the course in pharmacology and as an adjunct to that subject.

II. The chief emphasis on toxicologic subjects in the course in pharmacology pertained to the toxic effect of therapeutic agents.

III. In the majority of schools sufficient emphasis was being placed on the forensic aspects of toxicology as it pertained to the practicing physician.

IV. Instruction in toxicology at the undergraduate level was rarely offered to students in related biologic fields.

V. There was very little opportunity for the medical student to obtain instruction in basic toxicology which would serve as a background for occupational medicine.

## The Teaching of Social Medicine on the Clinical Clerkship\*

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In a recent issue of this JOURNAL, Roemer<sup>1</sup> discussed the relationship of social medicine to the social sciences and effectively presented the thesis for the proper recognition of social medicine in the medical curriculum. That the teaching of this subject is essential to relate the modern physician to a rapidly changing social order has been emphasized by others.<sup>2</sup> By the formation of the Institute of Social Medicine at Oxford, the English have indicated recognition of the importance of such teaching; as yet, however, American medical schools have been reluctant to coordinate teaching of social medicine into a separate department.

Although an independent department would lend proper emphasis and dignity to the teaching of social medicine as Roemer suggests, we recognize that it will be some time before this objective is realized in American medical education. However, at best, teaching within such a department should serve only as orientation. We have, therefore, been concerned with the background, interests, and motivations of those teaching clinical medicine in order to assure inclusion of the subject matter of social medicine into the clinical clerkship. If the teaching staff encompasses the necessary breadth of vision the subject will receive proper presentation regardless of the department within which it is presented. To be convinced of the significance and utility of his teachings in social medicine, the student must observe their practical application throughout the medical school. Otherwise the subject remains an academic abstraction and its teachings fall into disrepute by neglect or by violation of principles in the clinical years.

Our interest in the application of the principles of social medicine (which we believe to be no more than the practice of "good medicine") has caused us to embody the teaching of social medicine within the clinical clerkship in pediatrics. It is this program which we are interested in presenting. Because the pediatric patient brings us into contact with the entire family, he is readily suited to the presentation of the medical problems relating man to his environment. Our fortunate situation of hospital and outpatient services which derive patients from an entire state provides an opportunity to present the problems of both rural and urban environments.

At the outset of the clerkship, the student is informed of the necessity of studying the "total patient" rather than just a clinical syndrome or, more succinctly, "to find out what kind of patient has a disease, rather than what kind of a disease the patient has." In order to develop a feeling of "social responsibility" on the clerkship, the student is informed that he will be expected to present his patient to his colleagues. He thereby contributes to their education

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while providing the staff an opportunity to observe his strengths and weaknesses, socially and professionally, which are later discussed with him. Our most effective teaching has been performed during these presentations centering about the patient.

To familiarize the student with the society in which he is to practice medicine, he is usually expected to present some information concerning the area in which the patient resides, the general economic level, occupational and racial groupings, and the forms of medical practice prevalent. This often provides valuable information concerning the background of the student; it also promotes a wholesome exchange of information between students of varied geographic, economic, and cultural origins. Many students have been stimulated to learn facts concerning their home communities which they had never known until their colleagues solicited such information from them. The opportunity to teach something of the cultural patterns of various groups in our population is excellent on most teaching services because of the heterogeneous background of the patients.

Determining the reasons for referral of a patient to a teaching hospital provides an opportunity to explore something of the cost of medical care, the limitations of local facilities, the role of the consultant, and the function of the teaching hospital. At all times it is emphasized that the best care is usually the most economical for the community, the family, and the individual. Thus we judiciously explore the physician's responsibility to the patient and indicate that inadequate study and treatment of the patient for reasons of economy (no matter how well intended) ultimately works to the disadvantage of all.

While discussing the circumstances of the referral of the patient, the social agencies in the community—medical and otherwise—may be related to the care of the patient. Thus the student is introduced to the service agencies customarily available in most communities. The functions of a maternal, infant, and child welfare program, and the relationship of the physician to these programs can be presented in the light of specific cases rather than as abstractions. The role of clinics for crippled children and rheumatic fever patients and available institutions for the care of these conditions is usually clarified during each clerkship when a pertinent case is discussed. The presence of a full-time medical social worker has facilitated the student's comprehension of the functions of available agencies for assistance to patients by encouraging the student to confer with the social worker. Because of his intimate contact with the patient and family, the student is often in a position to make valuable suggestions concerning social service for the patient.

In the consideration of the medical history much of social importance may be considered. Thus the nutritional history is not only a consideration of protein, fat, carbohydrate, mineral, and vitamin requirements, but also of the economic and cultural patterns which influence nutritional status. An exercise involving the translation of the diet into specific foods and their comparative costs (e. g., determining the economy of fresh orange juice in contrast to

ascorbic acid) is illuminating to students, many of whom have never faced any real economic burden, to say nothing of the problems of the family budget. The presentation of patients with infectious diseases offers an opportunity to discuss the functions of the health department in relation to the practitioner and the variations in the public health facilities in various communities. During his case study the student is expected to develop a working knowledge of the medical library if he does not possess it. Thus the utility of current literature in practice is emphasized and by suggested readings of relevant historical articles an attempt is made to teach medical history in a functional manner.

To understand the individual as a social being, an evaluation of personality development is suggested for each patient. This involves an attempt at evaluating all individuals in the child's environment in a dynamic manner, for all play a role in the unfolding of the child's personality. It is emphasized that a working knowledge of adult psychiatry is essential to the proper management of the pediatric patient. Integrated into this program is a resident in psychiatry who functions, not in a secluded department of psychiatry but rather within the pediatric department. Thus the patient is presented, not with his emotional life compartmentalized but as an integral part of the study of the patient. Similarly, to round out his knowledge of the patient, the student is encouraged to discuss the patient with the occupational therapist, dietitian and the nursing staff and to participate in their activities (it has become a common sight to observe students on the ward during off-hours, feeding an infant—an experience which many graduates of our medical schools have never encountered). To encourage a wholesome attitude toward clinical investigation any investigative procedures in progress on his patient are explained to the student.

While we have presented a teaching program on a pediatric clerkship, obviously similar application of the subject matter of social medicine may be made to any clinical clerkship. Its effectiveness depends, however, upon the orientation of the instructional staff. Therefore an attempt is made to select clinical instructors of adaptable personality who possess a broad background in the humanities and who are sufficiently alert to relate this background to their clinical teaching. Thus teaching by example becomes a reality. With such a program, it is interesting to observe the maturation of both the student and instructional staff which accompanies the perspective resulting from interpretation of the daily medical problems in the light of their social significance.

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## The Medical School and the Social Scheme

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We of the medical schools carry no banner for any scheme of socialized medicine. We suspect that social and asocial medicine are but extremes. Some group is "going to do something about it" and we shall have in some degree a new setup, no doubt with both good and bad features. We of the medical schools shall not dictate all the terms. Whether or not we agree, we shall have to adapt ourselves to the result.

Under any plan, everyone will suffer if the wrong men enter the profession. The membership will never be perfect. We are here concerned with foresight toward selection under possible changed conditions, lest we be caught off guard.

The attractions and appeal of medicine will be altered with a change in the management of medical problems. The type and quality of men and women seeking to get into medicine will change accordingly. The fabric of the profession, the cloth from which the new styles are to be cut, for better or for worse, is within the jurisdiction of those of us in medical schools. We can ignore the change, thereby bidding for trouble, or we can prepare for it, thereby helping to retain the more basic professional standards in the face of forces strong enough to submerge them. This preparation is our problem and our responsibility.

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Our present system for selecting medical students is predicated upon several assumptions.

First, we assume that there will be enough applicants so that we may select. The attractions of medicine will probably continue to justify this expectation.

Second, we have somewhat fatuously carried out the pretense that, under the American creed, we were choosing men of maximum ability. This pretense will continue while ability is defined, never twice alike, in terms favorable to the speakers. The sociable will call for sympathetic and understanding personalities, the graders will struggle for what they call performance, the investigators will call for bigger and better emphasis on research and/or publicity, and the socialized will call for trainees with certain beliefs, certain attitudes toward custom and behavior.

It is in this uncertain realm of ability that there is flexibility which permits adjustment. The drab fellow who can produce answers to trite questions is not necessarily desirable as a medical student, nor can we safely replace him with the smart but selfish fellow who can please instructors by ingratiating manners judiciously adapted to each of them. We can predict with equal assurance that it will be as unwise to select only those whose backgrounds give them a socialized outlook as it will to give preference to Democrats, Lutherans, or persons named Adams. Our obligation is to provide balance.

The old contentious problem of judgment of all the qualities desired in medical students and their evaluation has to be reconsidered in the light of changes that are likely to occur. Given a choice between five applicants of "equal abili-



ties," one out to understand medicine and work with patients, one out to capture a degree because of the entry it gives to other fields, one out to get in on the currently loose funds for research, one out to gain a sinecure in a political setup, and one with a mission for peoples but no sympathy for persons, which would you choose? No two of us would agree exactly.

We are at the crossroads. We are obliged to present medicine to students as it is, objectively. We must be objective, yet we are obliged to make subjective decisions. We know that Republicans are not entitled to choose only Republicans for medicine, but they should not have to eliminate Republicans either. Have we been leaning over backwards? In order to avoid an honest but necessarily vulnerable plan, have we floundered in a conflict among fair play, our honest judgments, and pressure which has been put upon us? We have all heard arguments for and against women in medicine, not to mention refugees, sons of physicians, Jews, Orientals, athletes, cripples, radicals, the acquisitive, the cold, the missionary, the laboratorian, the aristocrat, and the man below the tracks. Where are *we* of the schools in all this? Are we facing the issue or are we dodging? Maybe we are only egoists, saying that all, save thou and I, are suspect.

In each decision of acceptance of a medical student we are deciding in favor of one set of characteristics and, in that sense, are discriminating against another set. In view of the infinite combinations, it is small wonder that we are often accused of unfairness. I think our records of impartiality are good. The joker that makes us vulnerable is that *any* basis of choice is partial.

One group thinks it can evade this charge of partiality by what it pretends to be a measure of performance, the so-called objective grading. We do not dwell on this because it is evident subterfuge, not so much wrong as inadequate. Performance can be that of a robot or it can be intelligent, it can be heartless or understanding, it can be ethical in the best sense or subversive in its worst sense.

I think that we are agreed that we want men and women who can and will understand medicine and deal sympathetically with their fellow men in professional matters. If this be presumptuous, let it be so. The color of skin, the land of birth, the spiritual belief, or the political opinion enter only as they affect the basic precepts. They never do, collectively; individually, there are good candidates and criminals in every group. We need fear only unbalance.

In the coming generation we will have many applicants who have no intention of practicing medicine. Unless we face these applicants with courage, they will continue their proselyting path, perhaps virtuously but at the expense of taxpayers, future patients who need service, and applicants who wish to practice medicine. In these United States a man is entitled to his opinions on socialized medicine as he is on religion. There are definite limits to the pressure he can use to seek converts. There are too many limits in time and space allotted to medical schools to permit too much to be conceded to any one group, particularly one which deviates from the practice of medicine.

Can you answer these questions: Is an applicant whose goal is the promotion of socialized medicine entitled to replace a man who wishes to practice medicine? How often is a man whose goal it is to gain a faculty appointment to replace the man with a wish to deal with medicine? Granting that a good



many sociologic problems are and always will be related to medicine, as well as to other fields, are we going to fill our ranks with those folk who feel that they must arrange the lives of others?

The catch is one that reformers have always used. We cannot fight presumptuousness without being presumptuous. The opinions of our prospective students are influenced by youthful idealism, by sensationalists, by quieter lay writers, and by adults who, with generosity or desires for personal gain, seek to guide youth. What do we do about it? Our hearts proclaim this a free country. Our minds tell us that unbridled propaganda in any direction must be countered by an active yet honorable counterbalance.

There is one legitimate type of presumptuousness, that which presumes in order that others may not. Hitler presumptuously climbed to be what he believed was the top man in the top race. In questioning this our presumptuousness was as great as his except for one thing. We presumed, in order that he might not.

We can and do, of necessity, admit medical students presumptuously. We presume to state and to measure desired qualifications, not because we are able but because we must. We also presume, legitimately, to select in order that *no* group can inflict its opinions, habits, or attitudes on medicine. Within medicine, this philosophy is the heart of allopathic medicine and the antithesis of quackery. Within science, it is the key to objective observation. Within the state, it is democracy. We are only applying a principle.

The primary objective for medical men is the practice of medicine with patients. Medicine is not administration, the signing of certificates, appearances at meetings, giving speeches, or the control of economics. Besides the practice of medicine, despite some arguments, we have long agreed that the community needs some things that only a health department can give. Medical training of health officers seemed wise and future health officers, possibly not now or not always in good proportion, have entered our medical schools. To train some such men we have thought to be within a properly balanced program. There is a present tendency to call proper a balance which would throw into the medical schools of already sorely taxed communities and already crowded buildings hordes of medical men among whom frequently worthy researchers, socializers, psychiatrists, and public health workers would take over vast areas in which the practice of medicine, as it has been built, is only a small unit. Patients would be test tubes; practicing physicians would be the technical artisans. If some of these enthusiasts had their way, justice, industry, trade, and religion would also become relatively small units performing those duties the power trust did not choose to do. To any action there is an equal and opposite reaction.

We think medicine has not been built too poorly. We do not concede that we are obliged or privileged to change the meaning of the M.D., or that we are to be forced by a few into a scheme whereby taxpayers must put in many millions for the purchase of overlords of whom they may not approve or whom they may not see as overlords until it is too late. It is fairly easy to sell the community on the benefits it might derive, without showing the losses. The subject is on an emotional plane. At least one nonmedical man has done much

along this line by the simple process of pointing the finger of scorn at real and imagined faults in the schools and in the profession; we could outdo him ourselves with no effort at all were we not busy trying to correct some of them. In the eyes of his readers he makes green monsters of ordinary men and women attempting a difficult and often sordid task in this vale of tears. Many think the practice of medicine is a sufficient challenge to our best efforts without seeking too great a hand in the affairs of society.

I do not offer any clear solution to this problem—would that I could—but here are several ideas.

First, we must face and recognize the potential pressure in loading the ranks of medicine instead of looking away from their unpleasantnesses.

Then we must, I think, set as our deliberate goal the selection of truly representative men. With respect to medicine as such they can be of only one kind, men who will contribute quite directly to the practice of medicine. We cannot and should not try to set purely objective criteria for selection. We must strive toward impartial balance. We all know that the establishment of any criterion for the entrance to medicine is immediately followed by two kinds of challenges. All who think, rarely correctly, that they are affected by it adversely are up in arms. All applicants find devious ways to meet the new criterion. Put up an interview system, and there are scurrilous remarks about the color of neckties; the detection of pertinent questions and the discovery of successful answers becomes a fine art, quite regardless of honesty. Put up an aptitude test, and certain types of quick minds, criminal and clever as well as otherwise, step right into the upper brackets. Mention citizenship and there is a quick migration; local rights to vote become important and there is a quickened interest in the words expressing difficultly attained tenets of the state or country. Leave everything to grades, and you develop to a state of beautiful perfection the fine arts of cutting throats, cheating, and pleasing teachers. Suggest a quota, and the protests that we should accept those who can turn out the job by some other criterion are overwhelming.

Next, we must successfully hold down the systematists, whether they come from psychology, statistics, the university administrations, the dean's offices, or the faculty. Medicine is and will remain an art. An art may be defined as a field of activity in which the variables, to bring about a harmonious result, defy the minds of the smartest of men as to system but which none the less can be harmonized by gifted artists. The selection of men for medicine is equally fraught with variables and is equally an art. Schemes and systems may contribute but it is fatal to plot them too seriously on charts, to give them numerical values, or to assign percentage weights to any. Ultimately, somebody has to take the responsibility for acceptance, usually the Dean and a committee. They must take this responsibility and not use subterfuge. They must make of each case a patient. They must weigh the factors as artists and decide the placement of lines accordingly, as they would decide on a treatment. They must fight vigorously to defend the equal rights of man, which means that prejudice against socialized plans is the poorest possible excuse for eliminating an applicant, and, by the same token, prejudice in favor calls for the same answer.

If you of the faculty like or dislike a racial group to the point of prejudice, you have no right to vote on any question of the entrance of a member of the group. You do have a right to vote against racial discrimination, either way. I recall a conversation with a friend in which I protested against a black boy who elbowed people out of the way to board a train. The friend was so ardent a champion against discrimination that he immediately defended the negro, just as I expected. I had him. I said I reserved the right to protest against discourtesy at any time, by black or white; it is the discourtesy, not the color, that is the point. Some men on the faculty want to offset excessive racial ambitions of which history has shown the dangers. Others, contrariwise, say that laziness can be offset by ambition. The balance is a real art. Like art, no matter how it comes out it will be criticized. The certainty of criticism provides the safest possible impetus to honesty of choice; if you are going to lose anyway, there is no temptation to be other than honest. The danger is in rationalizing toward selfish ends, a common human fault frequently ignored.

The general plan for choosing medical students must begin with assurance that the training and intelligence meet a certain standard. This is the beginning, not the beginning and the end. It is not true that doubling the training permits us to halve another set of desirable qualities, say intellectual honesty. I mean just what I say, that the training and intelligence should be up to a fairly high standard; beyond that, balance is more important than more training and intelligence. On a good laboratory balance, balanced by heavy weights, a feather throws the beam. A man protected with half a unit of antitoxin may be made healthier by exercise or a loaf of bread than with four units of antitoxin.

Having screened those potentially able to carry on the craft of medicine, we now need to select from these those who will do more than that, those who will make of medicine a profession and an art, or, less selfishly, who will be of greatest medical service to those of the community with medical needs, who will be neatly fitted to a proper niche in the whole activities of the community, who will neither shirk their proper duties nor step into matters which are not their concern, and who will neither stand aloof from the whole problem of living nor importune with the theory that health is everything. Economics is everything, and so is politics, happiness, work, industry, or any of the things which, together, are essential parts of the whole of living.

We have still not put down any exact method whereby we choose from screened, potentially able applicants. In this presentation we are not dealing with the whole problem but with one phase, the impact of the social thinkers. I think in seeking specific methods we must use everything in our power to detect real and basic motives. This goes far beyond the mere asking why a man or woman wants to go into medicine. A lot of silly answers to this question emanate from desirable applicants and good answers come from undesirable applicants. Detection of true motives goes far beyond the questionnaire of the psychologist, designed to trap the unwary applicant into a confession of motive. Both these schemes can help but they are dangerous unless at the outset we admit that we can get only occasional aid from them. These yardsticks must be rubber and we must be adept in using them, even more adept in deciding when

not to use them. They can be meaningless; they are easily abused.

Motivation is an ethereal thing, often no one's business and superficially subject to change. Evaluating motives is hazardous. We have some obligation to add the motive to ability and character but we are more anxious to see what the motive indicates relative to ability and character. Who among us has not seen the missionary spirit in prospective students? This motivation can mean high worth or it can mean we are dealing with a reformer or a star-gazer. Of late years we have struggled with budding psychiatrists, some with sound ideals but many with no more than a notion, new to them, that life is necessarily mental, that most of our troubles are imaginary, that sex is potent, or that listening to people's troubles is a safe, interesting, and profitable way to practice medicine.

Look out for the student who thinks he is doing the world a favor by going into medicine, and should get overtime pay for it. Look out for the fellow who thinks he sees in wealth security from social woes, and the fellow who wants to gain security by pulling others down to his social or economic level. Beware of the applicant who sees in medicine not the responsibility for easing the pains of the patient but the sacrifice of patients so that a greater number, he thinks, may have something he thinks they should have. Often this reflects only egotism or ambition; seldom does it reflect qualities for a good doctor. We are not arguing these points; we only call attention to the indices in motivations. Medicine has been built on the pains of the neighbors and medicine has presumed to try to alleviate these pains. It has never presumed to dictate to people at large. Medicine is a dangerous place in which to establish a shift from those who would serve patients to those who, by calculation or idealism, would foster a hierarchy of medical dictatorship, or submit medicine to another hierarchy.

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We now take in many unscrupulous medical students who should never be taken in, because we lack courage and because we do not know how to keep them out. We take in ambitious types who, sooner or later, coldly mistreat patients in order to improve their own places in the community in which they live. We take in maudlin types, so earnest in helping people that they are not realists in visualizing medical problems. We take in researchers who will turn patients inside out and hope for and get autopsies to satisfy their own curiosities. It is a wonder we do as well as we do. There is much of which we cannot be proud, though we condone none of these things.

There is plenty of room for improvement. In improving, we can and must include the careful weighing of applicants who wish a medical degree to become administrative controllers, with honest intentions or otherwise, unwilling to let those with experience and judgment decide as best they can the balances of living. Our society is made up of many factors. Before our lives became so complicated, we found virtue in the thesis of "M. Y. O. B.," which, in the writer's youth, stood for "mind your own business." Maybe, in proper balance, it still has virtue in the selection of medical students in a way that recognizes the full rights of each man in his own business and denies the right of man to proselytize beyond proper bounds.

## St. Thomas's Medical School (Education in England)

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It is impossible to talk about St. Thomas's Hospital Medical School without first saying something in a general way about the development of medical education in England.

In the distant past, those who hoped to be doctors were apprenticed to either a physician or a surgeon and after completing this apprenticeship practiced medicine. Among the more distinguished doctors, the practice developed of taking their apprentices to hospitals and eventually using them there as assistants. This training was known as "walking the hospital" and from it arose modern medical education. Because of this, medical education is firmly linked with and is a part of hospital development. At the present time in England about one half the medical students are trained at Provincial Universities and the other half at the ten Teaching Hospitals in London. Since the hospitals are far older than the University of London, and since most of them had well developed medical schools with their own traditions and historical background, the University of London was at first, as far as medicine is concerned, regarded as new, and very largely as an examining body.

The oldest hospitals in London—St. Bartholomew's and St. Thomas's—trace their origin to institutions that were established approximately one thousand years ago. St. Thomas's Hospital, started in the year 1106 as an infirmary attached to the Priory of St. Mary the Virgin near the ancient Roman Bridge of Southwark on the River Thames and was largely devoted to the care of the sick and needy travelers entering the City of London. The story of its survival is naturally linked with incidents in the general life and history of London. In the year 1207, a fire destroyed most of the Priory and all of the records before that date. Following an appeal, the hospital was rebuilt and acquired considerable wealth from gifts of land and houses. Being linked with the Church, it shared in the Dissolution of the Monasteries in the early sixteenth century and was derelict for eleven years. London wanted its hospitals and in response to an appeal by the Lord Mayor and citizens of London, Edward VI granted the charters for the four Royal Hospitals. The other hospital, in the modern sense, is St. Bartholomew's Hospital; of the two other institutions restored at that time, Christ's Hospital has become a public school and Bridewell a penitentiary.

When the Great Plague drove the wealthier people out of London, Doctor Wharton, senior physician of the hospital, stayed and was specially asked by the King, Charles II, to take charge of the plague stricken soldiers brought to St. Thomas's. Later, the Great Fire of London destroyed a great deal of St. Thomas's property, but the hospital itself was spared.

The beginnings of the Medical School can be traced to 1700. During the following 100 years, apprentices visited the hospital and rules for their behavior and conditions of service were laid down by hospital regulations. Thomas Guy, a Governor of St. Thomas's, leased a part of the hospital site and built another hospital for incurable and mental patients. After his death it was found that Guy had willed that his hospital should be made open to all types of patient and have its own Governing Body, and so the two hospitals and schools, Guy's and St. Thomas's, developed in parallel. A final separation one hundred years later was brought about by a riot between the two which led to police being called in and the arrest of six medical students. The separation was a good thing for medicine as it is probable that the individual contributions of each school to the advance of medicine have been greater than if they had remained united. On sentimental grounds, however, it was regretted and since that time to this day, members of the staffs of both hospitals have dined together and expressed their unity by being members of "The United Hospitals Club."

The first actual building for the Medical School was erected in 1813 and was entirely separate from the hospital. Thirty years later a residential college was established; but about this time, in 1847, the schemes for extensions of the railways into London culminated in the compulsory purchase under act of Parliament by the railways of the site of St. Thomas's. So the hospital and school had to move.

The most suitable premises for the temporary hospital were found to be Surrey Gardens. This was a pleasure ground and zoological garden combined. The music hall was divided into three floors to hold 200 beds; the giraffe house was converted into a cholera ward; the pavilion became a laboratory and the elephant house was turned into dissecting rooms. Here St. Thomas's progressed until the opening of the new hospital on its present site.

During the time that the hospital was in its temporary buildings, a revolution in nursing was being initiated by Florence Nightingale and her work in the Crimea. Until her time, disease was looked upon as something so evil that women of little character or education would alone undertake the then disagreeable office of nurse. They had little or no training. Florence Nightingale, having demonstrated the value of intelligent nursing in the Crimea, decided on her return to England to establish the Nightingale School of Nursing at St. Thomas's Hospital, and here it has flourished ever since, so that today it is one of the leading schools of nursing in the country.

St. Thomas's Hospital and Medical School have always shown a remarkable power of survival; they shared in the Dissolution of the Monasteries, survived the Great Plague and the Fire of London, were ejected from their site by the needs of the railways, but no matter how hopeless the situation they have surmounted it.

The present hospital stands on the river Thames opposite the Houses of Parliament. A curtain block of buildings extends from Westminster Bridge throughout the greater part of the road side of the hospital building. From



this, the ward blocks pass at right angles towards the river. The curtain block protects the wards from noise and there is a wide open courtyard between each block of wards, so that although the hospital is in the center of London, the wards are surprisingly quiet, and since the Thames here is a tidal river, the air is automatically changed twice a day. At the river end of the ward blocks are balconies onto which patients can be wheeled, and here they have an uninterrupted view of the river. The building nearest to Westminster Bridge was, unfortunately, together with parts of other blocks, almost completely destroyed by bombing in the recent war.

The Medical School buildings are at the other end of the hospital. The students' clubs, dining room, and hall of residence, are just across the road. Students enter St. Thomas's Hospital at one of three stages. They can do their premedical course of chemistry, physics and biology in the school, or they can enter for their preclinical course, consisting of physiology, anatomy and biochemistry. On passing the required examinations, students pass automatically from these courses to the clinical period.

Provision to spend an extra year in the preclinical period and to take a science degree is made for any student who is especially interested in physiology and biochemistry. The premedical courses take one year, the preclinical, two years, and the clinical three years.

In the clinical period, following an introductory course in elementary medicine, surgery and pathology, students, in turn, become medical clerks and surgical dressers. This means in medicine a six months' appointment to a firm composed of one senior physician, one junior, a registrar and two house physicians, and in surgery to a firm of similar constitution. In effect, this is the basis of clinical training and is the modern survival of the apprenticeship system. The students then work in the special departments, doing obstetrics and gynecology, eye, ear, skin, etc. Students are only admitted into the clinical course in October or April and the number is limited to just under one hundred.

Approximately one half of this number of students is trained at St. Thomas's Hospital and are University of London students, the other students come from Oxford and Cambridge; so that in the clinical period, although the training of all students is the same, the students themselves may be preparing for degrees at Oxford, Cambridge or London. Until recently only male students were admitted, but in the past two years women students have also been admitted.

The lighter side of student life is encouraged and students run a full range of sports clubs as well as dramatic, art, music, debating and other societies and clubs. Facilities for these activities are provided by the school and the authorities urge all students to take part in them. This most of them do with the usual student abandon.



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## OF THE

### Association of American Medical Colleges

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#### *Sixtieth Annual Meeting*

The sixtieth annual meeting of the Association of American Medical Colleges will be held in Colorado Springs, Colorado, November 7, 8 and 9, 1949. The Hotel Broadmoor will be headquarters. The president of the Association, Dr. J. Roscoe Miller, has been appointed chairman of a program committee.

It is planned to have the program for the meeting an entirely new departure from former programs. The sessions will be held every day—except the third day of the meeting, and special topics will be assigned for discussion to groups—somewhat of the nature of a round table conference in that there will be a presiding officer, with associates, and free opportunity for discussion. A final get together of the three groups will round out the program.

A change will also be made in the carrying out of the dinner meeting. Addresses will be omitted. Special entertainment of a light but instructive nature will be offered by well trained entertainers. The Borden Award will be made at the executive session. The president's address will be delivered at one of the program sessions. The program gives promise of success.

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#### *The Medical Film Institute of the Association of American Medical Colleges*

The Medical Film Institute of the Association of American Medical Colleges has initiated its program February 15 in its offices at the New York Academy of Medicine, 2 East 103rd Street, New York City.

At the February meeting of the Executive Council, Dr. David S. Ruhe was

formally activated as director of the Institute, and the principles of operation were defined and approved. The projects which are being put under way in the immediate future have been outlined, and approved in their essentials. The Advisory Committee of the Institute will be convened in the near future to implement the program, and to provide a further stimulus toward the early broadening of Institute activities. The Audiovisual Committee is continuing its interim functions. Funds have been received from the Commonwealth Fund to partially support the initial program. Support has been assured from other Foundations to make possible the activation of the Institute at this time.

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#### *Warning*

Every year some one offers forged credentials in the attempt to secure admission to a medical school. Admitting committees have been cautioned repeatedly not to accept authenticity for credentials submitted by an applicant either for admission to the freshman class or for advanced standing, especially the latter, without verification. Always before final acceptance is made, any and all credentials submitted should be verified by the apparent source of issuance. College as well as medical school reports have been falsified—even letters of recommendation bearing a dean's signature. In some instances the forgery was so well executed that the presumed signor of a letter or endorser of credentials was puzzled as to whether or not the signature was his. College and university official seals have been duplicated—even the paper on which credits are recorded. Therefore it should be a routine procedure of admitting officers to verify all credentials at

the source. Even this may not always prove successful. In several instances, uncovered by the office of the Association, it was found that a "friend" in the registrar's office, some one who had access to records and seals, had been a party to the fraud. In such cases the records on file in the office of the Association have proven very helpful in uncovering the fraud.

The latest, most flagrant perpetration of fraud is that practiced by one Cecil N. (or U.) Dunlap, alias Harry Evans, who presented forged credentials from Ohio University, the University of Michigan Medical School, and George Washington University School of Medicine, together with a letter of commendation apparently signed by the dean of the last named school and secured admission—with advanced standing—by a medical school. The credentials submitted seemed to be too good to be open to suspicion or even to question.

Therefore, verify every credential before final acceptance is made. The Association can be helpful in checking applications for advanced standing or even for first admission. Has the applicant ever attended a medical school? If he has, our records will show that he has although he may say that he has not. Every year such cases are uncovered. The files of this Association are replete with information on students. Make use of them.

Queen's University, Kingston, Canada, reports that Harvet Smith has been submitting forged transcripts in support of his application for admission to medical schools. William Grant Parker submitted forged credentials of Queen's to McGill with a forged signature of the secretary, Dr. Orr. Louis Joseph Rosner submitted forged credentials presumably issued by Centenary College and Tulane University to the College of Medicine of the University of Tennessee. Doubtless these happenings can be duplicated by other medical schools which stresses the need for extreme caution before accepting any credentials which have not been received directly from the college or university concerned.

### *Intern Placement*

The Committee on Internships and Residencies of the Association of American Medical Colleges has held several meetings with the representatives from the three hospital associations and the Council on Medical Education and Hospitals of the American Medical Association discussing the problems surrounding the internship. Deans of medical colleges have, in the main, expressed themselves as being satisfied with the working out of the program submitted by the Committee, but the hospital associations are not yet satisfied that it is the best plan to follow. It is hoped that a satisfactory solution of the problem will be reached in the near future. The plethora of internships available and the dearth of graduates to fill these places call for some definite plan of procedure. Should all hospitals calling for interns actually need them? And, do some hospitals call for too many interns? Are all hospitals offering an educational program which is the equivalent of a university program? Or is the intern merely a glorified orderly? It is important to have the answer to these questions.

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### *Healing Arts Educational Advisory Committee*

The Selective Service System expressed its desire to cooperate with professional education by appointing a Healing Arts Educational Advisory Committee. The personnel of this committee is as follows: Association of American Medical Colleges: Dr. Stockton Kimball, chairman, dean, University of Buffalo School of Medicine; Council on Medical Education and Hospitals, American Medical Association: Dr. Donald G. Anderson, secretary; Association of American Dental Schools: Dr. Gerald D. Timmons, dean, School of Dentistry, Temple University; American Veterinary Medical Association: Dr. Walter R. Krill, dean, College of Veterinary Medicine, Ohio State University; American Osteopathic Association: Dr. Otterbein Dressler, dean, Philadelphia College of Osteopathy.

# Resolution of Appreciation

to  
**Dr. Fred C. Zapffe**

from the  
**Officers and Members**  
of the

**Association of American Medical Colleges**

Adopted as of November 9, 1948

**Whereas**, The Association of American Medical Colleges was founded in 1890 with a single purpose as stated in the original constitution, namely, the advancement of medical education in the United States;

**And Whereas**, Dr. Fred C. Zapffe has served as secretary of the Association for the past 50 years and due to his complete devotion to the Association and its objectives has been in large measure responsible for carrying out its mission at times almost alone and at great personal sacrifice;

**And Whereas**, Dr. Zapffe created and has edited since its inception, the Journal of the Association, the only journal devoted solely to the problems of medical education and an important instrument in the advancement of medical education;

**And Whereas**, As secretary of the Association, and personally, Dr. Zapffe for a period of 50 years has rendered invaluable advice and encouragement in raising standards, especially in those medical schools laboring under great handicaps.

**For These** and many other reasons now, therefore, **Be it Resolved**, That the Association of American Medical Colleges by resolution express to Dr. Fred C. Zapffe the sincere appreciation of the membership for his devoted and outstanding service to the Association and so to the advancement of medical education in the United States, that this resolution be spread upon the minutes of this meeting and, furthermore, that two copies be suitably engrossed, signed by the officers of the Association, and framed; one copy to be presented to Dr. Zapffe as a token of our personal affection and esteem, the other to be hung in an appropriate place in the office of the headquarters of the Association.

Chicago, Illinois  
November 9, 1948

*Benjamin B. Bump*  
Vice-President

*Walter B. Borden*  
President

*Joseph C. Hargrett*  
Chairman, Executive Council

*John R. Mearns*  
President Elect



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## College News

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### *Yale University School of Medicine*

Yale University and the New Departure Division of the General Motors Corporation have announced the joint sponsorship of a one year clinical fellowship for a graduate course in occupational medicine. The course will be directed by the Yale Institute of Occupational Medicine and Hygiene and the New Departure Division, in Bristol, Conn. Medical, teaching and hospital facilities in Bristol and New Haven will be utilized throughout the study. The Bureau of Industrial Hygiene of the Connecticut State Department of Health will also cooperate in the program. Approximately two months of the year's work will be devoted to each of the following sections: pre-placement and periodic physical examinations; care of injuries and occupational diseases; health consultations; industrial hygiene and safety; and administrative practices.

An uninterrupted two or three-week period of orientation in the Connecticut Bureau of Industrial Hygiene will be included in the section on industrial hygiene and safety.

In addition, special assignments will include a short thesis or project, 20 or more clinical conferences at the Yale School of Medicine, graduate sessions in public health at Yale and observation of the Hartford Small Plant Services.

A candidate for the fellowship must be a graduate of an approved medical school and must rank in the upper two-thirds of his class. At least a 12 months' rotating internship—or its equivalent in hospital training—is required along with an interest in occupational medicine and hygiene, public health, health conservation and case finding programs. A license to practice medicine and surgery in Connecticut is also required. A candidate who completes his fellowship study to the satisfaction of the faculty will be awarded a certificate.

Further information and applications may be obtained from the Institute of Occupational Medicine and Hygiene at Yale University.

Yale University and twelve state and national health and education agencies will join forces this summer in offering a graduate seminar in school health education.

The course was given for the first time last summer, when 18 men and women from secondary schools and colleges in Connecticut completed the requirements. The program is designed to meet the needs of elementary and secondary school teachers responsible for instructing or organizing health education programs.

Dr. Charles C. Wilson, professor of education and public health at Yale, is in charge of the course. Students will participate in the seminar from June 27 to August 5. An additional two weeks' work will be required for the preparation of term papers and project reports.

The seminar is offered under the Yale Department of Education and the Department of Public Health. It represents one-quarter of a year's work—eight credit points—when used to meet certificate requirements or when transferred to educational institutions where a year's credit is 32 points. Scholarships are available to Connecticut school teachers.

The organizations cooperating with Yale in planning and organizing the summer seminar and which will make their resources available, are: the State Departments of Health and Education, American Red Cross, Connecticut Cancer Society, Connecticut Dairy and Food Council, Connecticut State Medical Society, Connecticut Tuberculosis Association, Connecticut Parent-Teachers Association, Connecticut Society for Mental Hygiene, National Foundation for Infantile Paralysis, and the University of Connecticut.

Additional information and applica-

tions for enrollment may be obtained from Clyde M. Hill, chairman of the Yale Department of Education.

The Yale University Graduate School and School of Medicine are combining personnel and facilities in the formation of a new department and course of study in microbiology. The new group will bring together courses now offered by the Departments of Bacteriology and Immunology, Plant Science, Physiological Chemistry, and Zoology, all under the Graduate School, and the Section of Preventive Medicine.

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*Duke University  
School of Medicine*

On July 1, 1949, there will be available several two year fellowships in the Medical School. The stipends will be \$2,400 the first year, and \$3,000 the second year. The work, which will be under the direct supervision of a senior staff man, will include the following: (1) Special training in the subspecialty chosen. (2) Clinical and consultation practice with ambulatory and hospitalized patients, both public and private. (3) Teaching of third and fourth year medical students on the wards and in the clinics. (4) Clinical and laboratory research.

Only those who have completed three years of training in internal medicine, or a satisfactory equivalent, will be eligible for these positions, which have been designed to prepare the candidate for the practice of internal medicine. The following places will be available: (1) Hematology and allergy. (2) Pulmonary diseases. (3) Gastro-enterology. (4) Hypertensive cardiovascular and renal diseases. (5) Metabolic diseases. (6) Cardiology. (7) General internal medicine and therapeutics. Anyone interested should write to Dr. Eugene A. Stead, Jr., professor of medicine, Duke University School of Medicine, Durham, North Carolina.

A month's course in medical mycology under the direction of Dr. Norman F. Conant, is to be offered at Duke University School of Medicine and Duke

Hospital, Durham, N. C., during July, 1949. The course will be offered every day in the week, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi within the time allotted. The number of applicants for the course will be limited and the applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of \$50.00 will be charged for this course, upon the completion of which a suitable certificate will be awarded. Direct inquiries to Dr. Norman F. Conant, Duke University School of Medicine, Durham, N. C.

Dr. W. F. H. M. Momartz of the American University in Beirut is working with Dr. Hans Neurath as a research associate in the general field of protein chemistry. Dr. E. Charles Kunkle came to Duke August 1, 1948, as assistant professor of medicine in charge of the Division of Neurology. Dr. John A. Segerson returned to Duke as instructor in medicine to work in the Division of Neurology. Dr. Talmage Peele, in addition to his regular duties in the Department of Anatomy, is teaching clinical neurology as an associate in the Department of Medicine. Dr. Tihener Cskay of Oslo, Sweden, is joining the virology group as a biochemist. Mr. Edward Eckert, formerly of M. I. T., has also recently joined the same group as an associate in research. Dr. Frank Marion Melton came to Duke as associate in dermatology and syphilology.

Dr. Josiah Charles Trent, assistant professor of surgery and chief of thoracic surgery, died December 10, 1948, after a recurrent illness.

Dr. William John Dann, professor of nutrition, died December 5.

The 65th General Hospital has been activated recently at Duke as an army reserve unit, and Dean Davison, commanding officer, is now assembling a staff of key personnel. Dr. Davison holds a colonel's commission in the Army Medical Reserve Corps.

*University of Texas  
Medical Branch*

Dr. B. I. Burns, administrator of hospitals at the University of Texas Medical Branch, Galveston, and professor of anatomy, has accepted appointment as director of Municipal Hospitals for Kansas City, Missouri. Doctor Burns will assume his new responsibilities in March. Dr. Jack R. Ewalt, director of the Galveston State Psychopathic Hospital, has accepted appointment as administrator of the Medical Branch Hospitals in succession to Doctor Burns.

New teaching laboratories proposed for the Medical Branch, together with improvements in the physical plant facilities, will total more than \$2,000,000.

Doctor Marshal Brucer, recently appointed director of the Biology Division of the Oak Ridge Cancer Research Laboratory under the auspices of the Atomic Energy Commission, has been appointed visiting professor of physiology.

El Katif Shrine of Galveston has established a Shriner Crippled Children's Emergency Fund with a donation of \$1,000. Established by a Negro organization, the fund is to be used for the benefit of crippled children without regard to race or religion. The Fund will be administered by Arild E. Hansen, professor of pediatrics and director of the Child Health Program at the Medical Branch.

Dr. Randolph L. Clark, Jr., director of the M. D. Anderson Hospital for Cancer Research, Houston, has been appointed dean of the University of Texas Postgraduate School of Medicine, a division of the Texas Medical Center, Houston. Courses offered at first will be short term refresher training courses for graduates.

The H. H. Weinert Endowment Fund for Cardiovascular Research has been established by members of the family of Mr. H. H. Weinert of Seguin, Texas, a former Regent of the university. The endowment is for the purpose of supporting the researches of Dr. George R. Herrmann, professor of medicine and director of the Cardiovascular Research

Laboratory, on factors in the cause and control of arteriosclerosis. Contributions to the fund to date total more than \$15,000.

The Cabot Carbon Company of Pampa, Texas, has given a grant of \$1,500 to the Industrial Hygiene Laboratory to support studies under the direction of Dr. Carl A. Nau, professor of preventive medicine and public health on the control of effects of possible toxic dusts.

The Building Committee of the Medical Branch, under the chairmanship of Dr. W. B. Sharp, professor of bacteriology, reports plans for new buildings at the Medical Branch to cost more than \$6,000,000. These include part of a new general hospital and a private pavilion to be erected by the Sealy and Smith Foundation at an estimated cost of \$3,500,000. Additional hospital facilities further include the 32 bed Henry and Ross Zeigler Tuberculosis Hospital to be built by funds from the Zeigler bequest.

The Gold Medal of the American Academy of Orthopedic Surgery, comprising the scientific award for the Chicago meeting, has been awarded to Dr. G. W. N. Eggers, professor of orthopedic surgery, Dr. Thomas Shindler, resident in orthopedic surgery, and Charles M. Pomerat, Ph.D., director of the Tissue Culture Laboratory. The award was made for their exhibit showing the influence of pressure and contact on the healing of bone injury.

Dr. James F. Brailsford, founder of the British Radiological Association, and widely known for his pioneering work in radiology, was guest of honor at a special luncheon arranged by the faculty. Doctor Brailsford, who is professor of Radiology at the University of Birmingham, England, gave a special lecture to the staff and students on the role of radiology in medical education.

Hoffman-LaRoche, Inc., pharmaceutical manufacturers of Nutley, New Jersey, made a grant of \$4,000 to assist in supporting the studies of Dr. Eric Ogden, professor of physiology, on the influence of kidney factors in high blood pressure.



*University of Illinois  
College of Medicine*

Five research grants in the amount of \$14,346 have been awarded to the College of Medicine. Eli Lilly and Company of Indianapolis, Ind., has awarded a \$5,346 grant for studies on mumps vaccination by the departments of bacteriology and pediatrics, under the supervision of Dr. J. E. Kempf and Dr. Ralph Spaeth. LaRabida Jackson Park Sanitarium has contributed \$3,500 for the study of rheumatic fever. Dr. G. A. Bennett and Dr. H. G. Poncher will serve as project supervisors for the study which will be undertaken by the departments of pathology, pediatrics and medicine. The G. D. Searle Company of Chicago has awarded a research grant of \$3,000 to Dr. Max Samter of the department of medicine for clinical investigation of bronchial asthma. Dr. John R. Necheles and Dr. Alexander Wolf will participate in the study, an evaluation of antiasthmatic drugs. Smith, Kline and French of Philadelphia, Pa., has awarded a \$2,000 grant for the study of the effect of amines in experimental renal and other hypertension. The study is being undertaken by E. A. Ohler in the department of physiology. A research grant in the amount of \$500 has been received from the Commonwealth Fund for the study of nucleic acids in cells. The study will be conducted under the supervision of J. R. G. Bradfield in the department of pathology.

Dr. John S. Laughlin has been appointed assistant professor of radiology and radiation physicist. Dr. Laughlin is working on the betatron project on the campus.

Establishment of the Patrick and Bertha Mooney Memorial Fund for the assistance of worthy students attending the College of Medicine has been announced. The fund has been established by Dr. F. P. Mooney of Philo, Ill., a graduate of the University of Illinois, as a memorial to his parents. The fund is to be used under the direction of Dean Youmans for the assistance of any needy and deserving student.

Three research grants in the amount

of \$11,100 have been awarded to the college by the Mallinckrodt Chemical Works, the Josiah Macy, Jr., Foundation, and Swift and Company. The Mallinckrodt Chemical Works has made a grant of \$4,000 for a pharmacological study of alkyl carbonates. The research will be conducted in the department of pharmacology, under the supervision of Dr. C. C. Pfeiffer. The Josiah Macy, Jr., Foundation granted \$3,600, as final payment on a grant made in continued support of a study of carbohydrate metabolism in mental disease. The study is being conducted by Dr. Warren S. McCulloch, with the assistance of Drs. L. J. Meduna and Franz Alexander. Swift and Company renewed a grant in the amount of \$3,500 for a study of the assimilation and excretion of amino acids as related to nutrition. The experiments will continue to be conducted by Dr. Tilden Everson, under the supervision of Dr. Warren H. Cole in the department of surgery.

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*New York University  
College of Medicine*

Dr. Henry E. Meleney, Hermann M. Biggs Professor of Preventive Medicine, New York University-Bellevue Medical Center, has been granted a six months' sabbatical leave to make a study of public health teaching needs at the American University of Beirut, Lebanon. Under a grant from the Commonwealth Fund, Dr. Meleney will sail February 8th for Lebanon, where he will prepare a report of teaching needs on the undergraduate and graduate level in the School of Medicine of the 80-year-old university, a member of the Near East College Association in this country.

A gift "in excess of eight million dollars" from the Samuel H. Kress Foundation to the New York University-Bellevue Medical Center, has been announced. The terms of the grant stipulate that the grant be devoted to the development at the Center of a program of post-graduate medical education which will be national and world wide in its scope, and which will require a decade to work

out on a constructive basis. Of the total grant by the Kress Foundation to the Medical Center, approximately \$4,000,000 will be made available as capital funds for construction of postgraduate facilities in the new buildings. A second \$4,000,000 from the Kress grant will be earmarked as support for a program of postgraduate medical teaching. Into the new Post-Graduate Medical School has been incorporated the program and properties of the New York Post-Graduate Medical School and Hospital.

As a result of this move, the New York University-Bellevue Medical Center has in operation two medical schools—one devoted to postgraduate medical education, and one at which medical students earn M. D. degrees.

A four-block site, just north of Bellevue Hospital, has been purchased by the university for the new buildings for the Medical Center. The land comprises the area between First Avenue and East River Drive, between Thirtieth and Thirty-fourth Streets. The new Post-Graduate Medical School has its own faculty and dean, with an analytical program for a model organization and administrative responsibility. In addition to the two medical schools, the Medical Center has in operation its Institute of Rehabilitation, an Institute of Industrial Medicine, the University Clinic, and the University Hospital (formerly Post-Graduate Hospital).

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#### *University of Buffalo School of Medicine*

Elective work has been introduced for the first time in the Medical School. The medical curriculum has been revised in several ways so that students, while taking the mandatory courses and clinical work, also have the opportunity to develop special interests. These elective opportunities consist of individual research projects, special study in certain departments and group seminars. These opportunities are available, in sophomore, junior and senior years. In the last half of the sophomore year, students may choose a series of conferences on special

subjects, such as pathology, may work in a bacteriology laboratory or may pursue research in specific fields. Students are required to take six weeks of hospital work in the summer between the sophomore and junior years, and for these six weeks they get four weeks of credit in medicine or surgery. This extra time may be used electively in the junior year in the field in which they are interested or in their special research projects. Or, they may elect to continue regular work during this time. In the summer between the junior and senior years, students may do extra work and get credit for it during the senior year. In addition, a series of elective conferences on a higher level is conducted during the senior year.

Other extensive changes in the medical curriculum also are in progress. One set of changes represents an effort to bring about a more complete correlation between the basic sciences and the clinical subjects. Clinics and clinical conferences are now conducted by the Departments of Medicine and Surgery in connection with the courses in anatomy, biochemistry and physiology. Another radical change is being effected in the work of the last two years. The junior year has been largely cleared of the heavy load of didactic instruction and juniors are now assigned to the clinical clerkships which were formerly reserved to seniors. The senior year now will be the period in which students receive their outpatient specialty instruction.

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#### *Indiana University School of Medicine*

Richard L. Webb, Ph.D., professor of anatomy, has been named acting chairman of the department, succeeding Dr. Edwin N. Kime, who has been transferred to the Indianapolis campus to supervise postgraduate work.

Dr. John H. Waterman, associate professor of psychiatry, will serve as director of the Child Guidance Clinic which is being opened at the Medical Center under the sponsorship of the Indianapolis Junior League. The clinic, to deal with the emotional and psychi-

atric disturbances of children, will be open to the entire state.

Dr. Emil Meirowsky, internationally known for his work in oncology and dermatology, has accepted an appointment to the staff of the School of Medicine as research assistant in surgery (oncology). The investigations which Dr. Meirowsky has pursued for many years, both in his native Germany and in England, are being carried on here.

The second annual postgraduate course on malignant disease is being offered to practicing physicians April 6 and 7 (1949) with the cooperation of the Indiana Cancer Society.

Construction is under way on a \$400,000 research wing at the James Whitcomb Riley Hospital for Children, providing laboratory and other space for investigative work on the diseases of children under the supervision of the Indiana University School of Medicine. A \$250,000 grant in support of this research program has been made by the Riley Memorial Association.

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#### *Northwestern University Medical School*

Two gifts, totaling \$65,000, were received from the Lois Grunow Memorial Clinic, Inc., of Phoenix, Ariz. The sum of \$50,000 has been allocated by the Clinic's board of directors in support of the department of surgery, and is to be known as the Lois Grunow Surgical Fund. The second gift of \$15,000 has been designated as the Lois Grunow Professorship Fund, and will finance a professorship in the surgery department.

The Chicago Heart Association made a grant of \$25,000 to the Rheumatic Fever Research Institute of the Medical School for the purpose of furthering the investigations of Dr. Alvin F. Coburn, director, and his associates in the Institute. The grant is from the Association's Morris Fishbein, Jr., Memorial Fund. Another grant of \$25,000, from the James Foundation of New York, brings the total of functioning research units to six. The minimum goal is eight labora-

tories, with the completion of the remaining two contingent on the raising of additional funds. The present laboratories are for research in physiology, enzyme chemistry, bacteriology, immunology, physical chemistry and experimental pathology. The latter two are those recently equipped.

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#### *Columbia University College of Physicians and Surgeons*

Establishment at the Columbia-Presbyterian Medical Center of an Institute of Cancer Research will launch an overall, integrated attack on malignant disease. The new institute is being developed primarily to bring about an integration of the activities of the numerous medical sciences concerned with cancer research. The additions are three new floors of cancer research laboratories to be constructed at a cost of \$2,000,000 atop the present Vanderbilt Clinic, and the Francis Delafield Hospital, a 350 bed cancer hospital now being erected at the Medical Center by the City of New York. This latter unit will cost approximately \$7,000,000.

Dr. Cushman D. Haagensen has been appointed director of the Institute. He is also associate professor of surgery.

Dr. Paul R. Hawley, chief executive officer of the Associated Medical Care Plans and former chief medical director of the Veterans Administration, will give the second series of Bampton Lectures beginning May 9. The series of seven lectures is entitled "New Medical Discoveries and Their Effect upon the Public Health." The Bampton Lectures were inaugurated last year by Arnold Toynbee, British historian and author of "A Study of History." The first three lectures, May 9, 10 and 11, will deal with "Our Fabulous Blood." These will be concerned with ancient superstitions associated with the blood, the discovery of blood typing, the development of blood transfusions and blood substitutes, and the RH factor with its physical and social effects.

On May 12, Dr. Hawley will discuss the latest surgical techniques used in

heart surgery and "blue baby" operations. Lung surgery in cancer and tuberculosis will be explained with the aid of motion pictures of actual surgery.

The last three lectures on May 16, 17 and 18 will explore the prevention and treatment of mental disease and the socio-economic aspects of medical care. Dr. Hawley will trace the economic history of medical care and the gradual development of public responsibility in the fields of health and medical care.

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*University of Vermont  
School of Medicine*

A heart unit to be known as the Cardiovascular Department is being opened in the Bishop DeGoesbriand Hospital to be operated by the hospital with the full cooperation of the College of Medicine. Dr. William Raab, professor of research medicine, will be the director. His associates will include Dr. Eugene Lepeschkin, assistant professor of research medicine, and Dr. John Bland of the hospital staff, fellow in cardiovascular research. Angina pectoris and so-called hypertensive heart disease will be the two main clinical entities to be studied. The department will be affiliated closely with the cardiovascular outpatient clinic which is under the direction of Dr. Christopher M. Terrien, professor and head of the department of medicine in the college.

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*University of California  
Medical School*

The Rockefeller Foundation has pledged \$100,000 to the university for equipment of the new Virus Laboratory of Dr. Wendell Stanley, Nobel Laureate who recently joined the faculty on the Berkeley campus. The funds will be available for the three year period, 1949-1951. The equipment will include a mass of highly specialized technical equipment needed in a large laboratory.

The U. S. Public Health Service has pledged \$117,461.98 for support of a variety of cancer research projects.

The largest item is \$85,064 to support

the research ward of the Laboratory of Experimental Oncology.

Another grant of \$24,999.98 will support a program for the improvement of methods of teaching cancer in medical schools.

A third grant, of \$4,320.00, will support studies of Dr. David M. Greenberg, professor of biochemistry on the Berkeley campus. Dr. Greenberg, using radioactive substances as tracers, has made progress in studies of how protein is formed. He will use part of the funds in studies of possible methods of blocking cancer growth by blocking the formation of proteins.

The fourth grant, of \$3,078, will be used by Dr. H. D. Moon, of the Laboratory of Experimental Oncology.

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*University of Wisconsin  
Medical School*

Dr. Otto A. Mortensen, professor of anatomy, has been appointed assistant dean. Dr. L. H. Cole, the news reporter for the school, died suddenly early in January.

Dr. Ralph M. Waters, professor of anesthesia, has retired.

A grant-in-aid of \$4,000 for research in nutrition by Dr. C. A. Elvehjem, dean of the graduate school and chairman of the biochemistry department, has been made by the Robert Gould Research Foundation, Cincinnati.

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*Stanford University  
School of Medicine*

Dr. William Mushin, English anesthesiologist, will be visiting professor of anesthesiology March 15 to May 15. Dr. Mushin is professor of anesthesiology at both the University of Wales and the Royal College of Surgeons of England. He holds degrees of Master of Arts, Oxford University; Master of Science, London University, and Bachelor of Medicine, London University. In addition, he is a Diplomate of both the Royal College of Surgeons of England and the Royal College of Physicians of London.

*Temple University  
Medical School*

A Gold Medal, the highest honor of the Radiological Society of North America, was awarded to Dr. W. Edward Chamberlain by the society. The Gold Medal is awarded for distinguished service to medicine and to radiology in particular.

Recent contributions for research projects have been received from the following, to begin January 1, 1949: U. S. Public Health Service—A grant of \$10,000 to Dr. Valy Menkin for a cancer research problem on "The Relation of Cellular Injury to the Development of Neoplasia." A grant of \$3,600 for studies by Dr. Machteld E. Sano on "The Lability of the Lymphomata." A grant of \$37,500 for the teaching of psychiatry. From Bachmann Brothers, Inc.—A grant of \$5,100 for research by Dr. Robert H. Peckham for "The Precise Measurement of the Protective Value of Sun Glasses."

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*Bowman Gray  
School of Medicine*

Dr. Parker R. Beamer, department of pathology, Washington University Medical School, St. Louis, has been appointed professor of microbiology and immunology and associate professor of pathology. He will assume his duties on July 1. Dr. Richard Masland, assistant professor of neuropsychiatry since 1947, has been made associate professor of neuropsychiatry in charge of neurology. Dr. J. Maxwell Little, former associate professor, is now professor of pharmacology and associate professor of physiology.

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*Medical College of Virginia*

The Medical College of Virginia has renovated, enlarged and named one of its buildings, the Brown-Sequard Research Laboratory, in honor of Charles Eduard Brown-Sequard, a professor in the college in 1854 and 1855. Dr. Brown-Sequard engaged in extensive research in physiology. The building at the Medical College of Virginia which bears

his name will be used as a center of research at the college.

Dr. Eugene A. Stead, Jr., professor of medicine, School of Medicine, Duke University, delivered the Lewis T. Stoneburner III Lecture January 14. This lectureship was established last year by friends who were members of the 45th General Hospital with Capt. Stoneburner, an honor graduate in medicine at the college, class of 1937, who lost his life in World War II.

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*Marquette University  
School of Medicine*

Dr. F. Herbert Haessler has been appointed to a full time professorship in ophthalmology. The professorship has been established in memory of the late Dr. John L. Yates and his sister, Carol M. Alice. Dr. Haessler will develop a graduate training program in ophthalmology. Dr. Edward A. Bachhuber has been appointed assistant dean. He will be in charge of the medical educational program for medical students and residents at the Milwaukee County Institutions. The appointment follows a recently arranged affiliation between the Marquette University School of Medicine and Milwaukee County Institutions.

An anonymous donor has created the first time clinical professorship at Marquette. Dr. F. Herbert Haessler has accepted the full time professorship in ophthalmology. He will manage the eye clinic and dispensary. The chair was established as a memorial to the late Dr. John L. Yates, surgeon, and member of the Marquette faculty for many years, and his sister, Mrs. Carol M. Allis.

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*University of Kansas  
School of Medicine*

A rural health measure appropriating \$3,862,560 to the University of Kansas Medical Center for new buildings and equipment passed both Houses of the Legislature and is awaiting the signature of the Governor, which, it is reported, is assured. The appropriation is intended to increase the output of doctors in Kan-

sas as well as nurses and medical technicians. The bill provides for the erection of two new buildings for the treatment of chest diseases and psychiatric cases, with 75 beds each, at a cost of \$481,860 each; a service building at \$811,957 and a basic science building at \$757,102. Total improvements will increase the hospital beds to 700.

Dean Franklin D. Murphy of the medical school had advanced a 3-point program to increase the number of doctors in rural areas. It includes increased production, made possible by the added hospital beds, community sponsorship of offices and equipment for young doctors, and intensive refresher courses to keep doctors in rural areas abreast of advances in medicine.

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#### *Louisiana State University School of Medicine*

In celebration of his seventieth birthday, a testimonial dinner was given to Dr. Urban Maes by patients and friends October 29. Speakers included members of the faculty of the School of Medicine and representatives of staffs and boards of trustees of Touro Infirmary and Charity Hospital. Dr. Maes retired as professor and head of the department of surgery and was appointed professor emeritus in 1947. He recently completed fifty years of practice at Touro Infirmary.

The Louisiana State University School of Medicine has completed arrangements for a refresher course in pediatrics that will be held on March 21 through 25, 1949, with the attendance restricted to forty physicians. Dr. William Bradford of the Department of Pediatrics, University of Rochester School of Medicine, and Dr. Harry Gordon of the Department of Pediatrics, University of Colorado School of Medicine, will assist in presenting the program.

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#### *Woman's Medical College*

The Woman's Medical College of Pennsylvania celebrated its Founders' Day, marking the ninety-ninth year of

its charter, March 11, 1949. Thirteen faculty members who have served the college for twenty-five years were given service citations.

At the invitation of Dr. William G. Leaman, professor of medicine, a symposium on "The Future of Medical Practice in America," was held last month. Participating with Dr. Leaman were Mr. William Irwin, executive secretary, Philadelphia County Medical Society, and Dr. Richard H. Shryock, professor of history, University of Pennsylvania, who acted as moderator for the discussion.

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#### *University of Colorado Medical Center*

The Center announces the establishment of the Damon Runyon Laboratory of Chemical Embryology. The laboratory will be housed in a new cancer research wing to be constructed with funds made available by the National Cancer Institute of the U. S. Public Health Service and University of Colorado. A grant of \$25,000, received in July from the Damon Runyon Cancer Fund, will be administered by a joint committee from the departments of biochemistry, obstetrics and gynecology and pediatrics. The director of the laboratory, who will begin his duties as associate professor of pediatrics (research) on July 1, is Heinz Herrmann, assistant professor of zoology at Yale University.

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#### *University of Southern California School of Medicine*

Grants received: \$25,000, National Cancer Institute; \$5,184, U. S. Public Health Service for the study of synthetic reactions in normal and cancerous tissues under anarobic conditions. The work will be done under the direction of Dr. R. J. Winzler, of the biochemistry department. A grant of \$3,600 from the Nutrition Foundation for the continuation of studies on carotenoid and vitamin A metabolism. This work will be under the direction of Dr. H. J. Deuel, Jr., and Dr. J. W. Mehl of the depart-



ment of biochemistry and nutrition. A grant from the National Vitamin Foundation of \$3,500 for investigation on the time factor in feeding on the utilization of water soluble vitamins under the direction of Dr. E. Geiger of the department of pharmacology and toxicology.

\* \*

*University of Minnesota  
Medical School*

Friends, pupils and patients of the late Dr. Jennings C. Litzenberg, who was professor emeritus at the Medical School, have asked the Minnesota Medical Foundation to set up a memorial fellowship. The foundation has agreed to act as trustee for the fund, which, if adequate, will be used to provide annually for the support of advanced training at the University of Minnesota, Minneapolis, or elsewhere, of especially promising physicians in obstetrics and gynecology or in basic science fields fundamental to maternal welfare. If the fund should be inadequate for this purpose, it will be used for some other appropriate subject to be determined by the trustees of the foundation.

Professor A. C. Ivy, vice-president of the Chicago Professional Colleges, University of Illinois, delivered the Luthard N. Bergh Memorial Lecture February 16th on the subject, "Certain Aspects of the Physiology of the Extra Hepatic Biliary Tract." The lecture is sponsored by the Minnesota Medical Foundation and was made possible by a trust fund for medical education and research financed by gifts from relatives and friends of Dr. Bergh.

\* \*

*Tulane University of Louisiana  
School of Medicine*

Dr. Robert G. Heath of the College of Physicians and Surgeons, Columbia University, has been appointed chairman of the department of psychiatry and neurology.

*Wayne University  
College of Medicine*

A new program authorized for the second semester of the 1948-1949 school year for the Wayne University Graduate School will lead to the degree, Master of Science in Ophthalmology. Dr. John J. Lee, dean of the Graduate School, announced the new program. It is intended for doctors wishing to specialize in care and treatment of the eye, and will be offered through the facilities of Wayne's College of Medicine. Eight new courses devoted to ophthalmology have been added to the medical curriculum.

\* \*

*Johns Hopkins University  
School of Medicine*

Five scientists have been named to faculty posts in a new department of biophysics, now called the Jenkins Department of the university in honor of the late Thomas C. Jenkins. Dr. Haldan K. Hartline, professor of biophysics, is chairman of the new department. Others named are John P. Hervey, M.S., Martin G. Larrabee, Ph.D., Frank Brink, Jr., Ph.D., and Philip W. Davies. Dr. Larrabee and Mr. Davies are associate professors, and Dr. Brink and Mr. Hervey assistant professors. All of the new appointees are at the University of Pennsylvania, where they have been working with Dr. Bronk in biophysics.

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*Albany Medical College*

Dr. Thomas Hale has been appointed associate dean of the college and Dr. John K. Meneely, Jr., assistant dean. Dr. Merel Hilber Harmel has been appointed associate professor of anesthesiology and attending anesthetist to the Albany Hospital. Dr. Charles W. Landmesser has been appointed instructor in anesthesiology and assistant attending anesthetist to the hospital.

\* \*

*Boston University  
School of Medicine*

Dr. Francis C. Lowell has been appointed assistant dean.



*University of Virginia  
Department of Medicine*

The residents, who trained under the late Dr. Tiffany Johns Williams during his tenure as professor of obstetrics and gynecology from 1931 to 1947, have established a lectureship fund in memory of Dr. Williams. The initial Tiffany Johns Williams Annual Memorial Lecture will be given at the university on April 8, 1949, by Dr. Nicholson J. Eastman, obstetrician-in-chief, Johns Hopkins Hospital.

Dr. Vernon W. Lippard, formerly dean of the School of Medicine of Louisiana State University, assumed his duties as dean of the University of Virginia Medical School on February 1, 1949. Dr. Lippard succeeds Dr. H. E. Jordan, who has served as dean of the Medical School since 1939. Dr. Jordan will remain with the Medical School as professor of anatomy until his retirement in June.

\* \*

*Medical College of Alabama*

A portrait of Dr. Seale Harris was presented to the college December 17. The portrait was a gift of the doctors of Alabama honoring Dr. Harris, who is professor emeritus of medicine, for his accomplishments in medical science. Dr. Harris was professor of medicine at the college when the school was located in Mobile. He is known as the discoverer of hyperinsulinism and is a medical biographer of note. The presentation was made by Dr. Lon Grove of Atlanta.

\* \*

*University of Chicago  
Medical School*

Dr. Clayton G. Loosli, associate professor of medicine and director of the Student Health Service of the university, has been appointed to take charge of the Division of Preventive Medicine and Public Health in the School of Medicine. He also will direct the Influenza Detection Service established recently at the university by the U. S. Public Health Service.

*University of Cincinnati  
College of Medicine*

Dr. Edward A. Gall, a graduate of Tulane University of Louisiana School of Medicine, 1931, has been appointed Mary M. Emery professor of pathology and head of that department and director of the department of pathology at Cincinnati General Hospital.

\* \*

*University of Nebraska  
College of Medicine*

Dr. Herbert H. Davis, a member of the department of surgery at the University of Nebraska College of Medicine, Omaha, has been appointed chairman of the department, succeeding Dr. J. Jay Keegan, professor of neurologic surgery.

\* \*

*St. Louis University  
School of Medicine*

Dr. Robert H. K. Foster has been appointed professor and director of the department of pharmacology, replacing the late Dr. John Auer, who died April 30.

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*University of Rochester  
School of Medicine*

Ernest L. Woodward, former head of the Jell-O Company, who died April 16, 1948, left \$2,198,571 for medical research and \$250,000 to the Genesee Memorial Hospital in Batavia.

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*University of Louisville  
School of Medicine*

Dr. John Walker Moore, dean, has requested retirement to become effective in June. He has served as dean since 1927.

\* \*

*Cornell University  
Medical School*

Dr. Robert G. Douglas has been appointed professor of obstetrics and gynecology, succeeding the late Dr. H. J. Standen.

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## General News

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### *Postgraduate Center for Psychotherapy, Inc.*

The Postgraduate Center for Psychotherapy, Inc., the training associate of the Institute for Research in Psychotherapy, Inc., has been granted a provisional charter from the Board of Regents of the New York State Educational Department. It offers intensive training for psychiatrists in psychotherapy leading to certification; also individual courses for general practitioners and non-psychiatric medical specialists in psychotherapy and psychomatic medicine. Clinical psychologists and psychiatric case workers are trained in methods that are within the scope of their education and skills, and which can contribute to an integrated program. The primary aim of the program is to encourage the development of teams of psychiatrists, psychologists, and social workers who can organize and operate community psychiatric clinics. The courses of instruction include practical demonstrations in psychotherapy as well as lectures. The work of all students is supervised by teachers qualified to manage a specific type of problem. Before the psychiatric student completes his training, he has had personal experience under supervision in the management of various types of cases.

Further information on this program may be obtained by writing to Stephen P. Jewett, M.D., Dean, or to Miss Janice Hatcher, Registrar, Postgraduate Center for Psychotherapy, Inc., 218 East 70th Street, New York 21, New York.

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### *Research Grants*

Smith, Kline & French Laboratories of Philadelphia has awarded in 1948 a total of seventy-three grants amounting to \$314,761, in support of medical research. Twenty-seven of these grants were made to twenty medical schools, and the balance to institutes, clinics and

individual investigators. The funds were provided under three main categories: as scholarships and fellowships; as aids to preclinical research in such fields as pharmacology, bacteriology, biochemistry, histology, microanalysis, mycology, organic chemistry and physical chemistry; and for support of investigations in various fields of clinical medicine as hypertension, pain, cardiovascular conditions, epilepsy, anemia, dermatology, obesity, etc.

\* \*

### *International Association of Medical Museums*

This office is prepared now to supply back numbers of the *Journal of Technical Methods* and *Bulletin of the International Association of Medical Museums* with the exception of Volume IX—a memorial to Dr. William Osler. This will be reproduced if enough orders are received to make it practicable.

The cost of the volumes is as follows: Volumes I, II, III (in one binding), \$2.00; Volumes IV through VI at \$2.00 each, \$6.00; Volume VII (reproduction), \$4.00; Volumes VIII through XXVIII (except Vol. IX) at \$2.00 each, \$40.00; total, \$52.00.

A discount of 10 per cent will be allowed on orders including the entire series. Address: International Association of Medical Museums, Army Institute of Pathology, Washington 25, D. C.

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### *Fellowships in Child Guidance Psychiatry*

The American Association of Psychiatric Clinics for Children offers fellowships for training in child guidance clinic psychiatry. These fellowships are made possible financially by the U. S. Public Health Service and sometimes by local funds. In addition, a few communities are offering to finance the training of psychiatrists who will engage to

work for them for a given period following their training on a contractual basis. The training is for positions in community clinics where psychiatrists, psychologists, social workers and others collaborate in the treatment of children suffering from emotional illness.

Most of the fellowships are for two years; some for one. The stipend is in the neighborhood of \$3,000 for the first year, and around \$3,600 for the second. The awarding of the fellowship for the second year is always dependent upon the quality of the first year's work. Prerequisites are graduation from an approved medical school, a general internship and two years of approved general psychiatry (and personal qualifications essential for such work).

Opportunity is provided for the fellow to develop his own skills in a well organized outpatient service with the support of a carefully planned training program and adequate supervision. The training centers are selected on the basis of standards which have been established by the American Association of Psychiatric Clinics for Children, and the fellowships are awarded by a committee of this organization.

For further information write to Dr. A. Z. Barhash, Executive Assistant, the American Association of Psychiatric Clinics for Children, 1790 Broadway (Room 916), New York 19, N. Y.

\* \*

#### *Cancer Teaching Film*

A new motion picture teaching film, aimed at reducing the death rate from cancer, is now available to hospital staffs, medical schools, and groups of physicians in public health and private practice. Titled "Cancer: The Problem of Early Diagnosis," the film was produced under the joint sponsorship of the American Cancer Society and the National Cancer Institute of the U. S. Public Health Service. It emphasizes the importance early suspicion, accurate diagnosis and effective treatment hold in the cause of cancer control.

The film is the first in a series of six, to be produced within the next two years,

which are designed to constitute a teaching "package" on the subject of cancer. The next five films will deal with diagnosis of cancer by specific body site.

Prints for single showings may be had from State Cancer Society offices, State Health Departments, and from four regional offices of Association Films located in New York City, Chicago, Dallas, Texas, and San Francisco. The film may be purchased from Audio Productions, Inc., 630 Ninth Avenue, New York 19, N. Y., for \$150 and may be ordered from them for preview pending the decision to buy.

\* \*

#### *Television Film for Teaching Surgery and Medicine*

Television in natural color for the teaching of surgery and medicine to medical students will have a pioneering demonstration at the annual meeting of the American Medical Association at Atlantic City in June, under arrangements concluded by Smith, Kline & French Laboratories, Philadelphia, and the University of Pennsylvania. This revolutionary method of teaching will enable large groups of medical students to study close up in full color detail surgical techniques and medical procedures which now can be viewed by only a few at a time. Continuously for four days at the AMA Convention, actual surgery and diagnostic and other medical procedures will be televised in natural color while being performed by the faculty of the Medical School of the University of Pennsylvania and by the staff of the Atlantic City Hospital. The color television picture will be picked up at the Atlantic City Hospital and beamed on a closed circuit directly to Convention Hall for the benefit of the 12,000 physicians expected to attend the convention.

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#### *Obstetrics and Gynecology Prize*

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons will present a Foundation Prize of \$200 for the best 5,000 word manuscript from an intern, resident or

graduate student in obstetrics, gynecology or abdominal surgery or from physicians who are actively practicing in the field or engaged in research. The award will be made at the annual meeting of the association, where the successful contestant must present his contribution. For information address L. A. Calkins, M.D., secretary, University of Kansas Medical Center, Kansas City 3, Kan.

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#### *Medical School for New Jersey*

The Governor of New Jersey has approved a proposal of the Medical Society of New Jersey for a committee to study the need for the development and operation of an approved medical school for New Jersey. The society proposes the appointment of a representative committee of sixteen members, four of whom would be designated by the society, four by Rutgers University and eight to be appointed by the Governor. The committee will make its final recommendations to the Governor and the Medical Society.

#### *Four Year Medical School in West Virginia*

Bills have been introduced in the state legislature providing for the establishment of a four year school of medicine and dentistry in Charleston and the establishment of a state University Hospital for teaching purposes. These bills are supported by the Governor of the State and the medical and dental state societies. The two year school located in Morgantown would, no doubt, be discontinued.

\* \*

#### *Upjohn Names Assistant Directors of Medical Division*

Drs. Earl L. Burbidge and William F. Wenner have been advanced to assistant directors of the Medical Division.

Dr. Burbidge, a graduate of the University of Wisconsin and Washington University (St. Louis) Medical School, will be in charge of the Clinical Research Department. Dr. Wenner, also a Washington University Medical School alumnus, will head the Product Information Department.

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## BORDEN AWARD

Attention is directed to the importance of making nominations for the 1949 Borden Award. Thus far, only two nominations have been received. So much worth while research is being done by members of medical college faculties that it would seem that many nominations for the award should be made. Names submitted for the 1947 and 1948 awards can be resubmitted for consideration for the 1949 award. Material submitted was returned by the Committee, therefore, new material must be submitted if these nominees are to be considered again. It is important to act promptly so that the Committee will have ample time to consider nominations.

## Book News

### *Functional Neuro-Anatomy*

By A. R. Buchanan, M.D., Professor of Anatomy, University of Colorado School of Medicine, Denver. Lea & Febiger, Philadelphia. 1948. Price, \$6.50.

This book utilizes a strictly functional approach to the subject. Ascending and descending tracts are traced from origin to termination at the time of their first mention. In addition, clinical applications are discussed in the text itself. This method of presentation has been proved successful by the author in holding the interest of students throughout the period allotted to the course.

Because of the limited time most medical schools devote to the study of neuroanatomy, it is important that students have available a text in which the essential material is presented as concisely as possible, while still giving a full understanding of the subject. The need is well met in this book.

The 199 illustrations, some of which are in color, admirably supplement the text matter. Their value to students has been immeasurably increased by the elimination of extraneous details. Those figures representing cross-sections of the nervous system are based upon tracings of actual sections. Those not credited to other sources were prepared by Dr. Buchanan from appropriate sections or gross specimens.

♦ ♦

### *The Child in Health and Disease*

By Clifford G. Grulee, M.D., Rush Professor of Pediatrics, University of Illinois, and R. Cannon Eley, M.D., Associate in Pediatrics and Communicable Diseases, Harvard University Medical School. The Williams & Wilkins Company, Baltimore. 1948. Price, \$12.

A complete text on pediatrics; 1,000 pages; double column.

♦ ♦

### *Manual of Urology*

By Ralph M. LeComte, M.D., F.A.C.S., former Professor of Urology, Georgetown University School of Medicine. Ed. 4. The Williams & Wilkins Co., Baltimore. 1948. Price, \$4.

Besides being completely revised, this text presents new material to bring it in line with the latest developments in the treatment of urological diseases. The book presents briefly and simply the underlying principles in urology without complicating discussions, case histories and numerous references.

### *Psychiatry in General Practice*

By Melvin W. Thorner, M.D., Assistant Professor of Neurology, the Graduate School of Medicine, University of Pennsylvania. W. B. Saunders Company, Philadelphia. 1948. Price, \$8.

This book is written primarily for the general practitioner who the author believes is the one who needs guidance in an attempt to place preventive psychiatry on a firm and understandable basis. Most patients found in any doctor's office come because of some mental problem rather than organic disease. The writer's work is the result of experience with patients; the language used is simple and non-technical, with very few definitions. It is entirely different from the usual text dealing with psychiatry. It is an attempt at elementary orientation. It should make a strong appeal to the general practitioner.

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### *Embryology of the Pig*

By Bradley M. Patten, Professor of Anatomy in the University of Michigan Medical School. Ed. 3. The Blakiston Company, Philadelphia. 1948. Price, \$3.75.

Presents the fundamental facts of mammalian development. Revised and brought up to date, with many new illustrations added, some in color. A deservedly popular book.

♦ ♦

### *Lambert's Histology: An Introduction and Guide*

Revised by Helen L. Dawson, Ph.D. Ed. 2. The Blakiston Company, Philadelphia. Price, \$6.

This text is written for the liberal art student as well as the medical student. Many new illustrations and color figures have been added. All diagrams redrawn.

♦ ♦

### *Campbell's Operative Orthopedics*

Editor, J. S. Speed, M.D.; associate editor, Hugh Smith, M.D., members of the Campbell Clinic and the faculty of the University of Tennessee College of Medicine; with collaborators. Ed. 2. The C. V. Mosby Company, St. Louis. 1949. Price (2 Vols.), \$30.

An encyclopedia of information on orthopedic surgery by an outstanding group of specialists. Orthopedic techniques are described carefully and illustrated well. The entire field of this specialty is covered. More than 1,100 illustrations complement the fine text.

***The Ciba Collection of Medical Illustrations:  
A Compilation of Pathological and  
Anatomical Paintings***

Prepared by Frank H. Netter, M.D. Published by the Ciba Pharmaceutical Products, Inc., Summit, New Jersey. 1949. Price, \$6.50.

A collection of 191 full color plates, a real work of art—and very informative.

Seeing all of these plates in a book is most impressive. Here an artist of consummate skill brings to the physician and the student graphic full-color pictures of the anatomy depicting common pathological conditions.

Dr. Netter has combined with his drawings wherever appropriate, x-ray pictures that enable the practitioner to visualize the internal condition portrayed in the x-ray plate. In addition, full-color drawings of photo-micrographs show the scene on the slide that may be examined to detect some pathologic condition either in a secretion or tissue.

The text accompanying each plate was prepared by a physician who is an authority on that subject. The concise, clear language makes the subject easily understood. Having the text on the same page with the illustration is of great help as it enables a quick, easy correlation of the text with the illustration.

The book contains four sections as follows: Sec. I: The Chest; Sec. II: Gastrointestinal System and Abdomen; Sec. III: Testicle, Prostate, Male and Female Breast; Sec. IV: Heart and Aorta.

This book must be seen to be appreciated properly.

\* \*

***Personality and Its Deviations***

By George Herbert Stevenson, M.D., Superintendent The Ontario Hospital, and Leola E. Neal, Department of Psychology, University of Western Ontario, London, Canada. The Ryerson Press, Toronto: Charles C. Thomas, Springfield, Illinois. 1949. Price, \$5.50.

An introduction to abnormal and medical psychology, imparting an understanding of human behavior in all its aspects and contacts. Psychosomatic medicine is stressed.

\* \*

***Introduction to Organic and  
Biological Chemistry***

By L. Earle Arnow, Ph.D., M.D., Director of Research, Medical Research Division, Sharp & Dohme, Inc., and Henry C. Reitz, Ph.D., Assistant Professor of Biochemistry, Purdue University. Ed. 2. The C. V. Mosby Company, St. Louis. 1949. Price, \$5.75.

Revised and rewritten with emphasis placed on material of interest to premedical students.

***Diseases of the Nose and Throat***

By Sir St. Clair Thomson, M.D., and V. E. Negus, F.R.C.S., Eng. Members of King's College Hospital. Ed. 5. Appleton-Century-Crofts, Inc., New York. 1949. Price, \$16.

An eminent authority pronounced this "the greatest textbook on the nose and throat ever published." An up to date presentation of the medical and surgical treatment of diseases, injuries and malformations of the nose and throat; profusely but well illustrated with a highly commendable index.

\* \*

***Diseases of the Ear, Nose and Throat***

By Douglas G. Carruthers, M.B., Ch.M., F.R.A.C.S., Canterbury District Memorial Hospital, Sydney. Ed. 2. The Williams & Wilkins Company, Baltimore. 1948. Price, \$7.

Revised; antibiotic chemotherapeutic agents are given added attention; treatment of tropical otitis externa is described fully as well as the operation for the removal of tonsils as a help to the general practitioner.

\* \*

***Anesthesia: Principles and Practice***

By Alice M. Hunt, Associate Professor of Anesthesia Emeritus, Yale University School of Nursing. G. P. Putnam's Sons, New York City. 1948. Price, \$2.60.

A presentation for the nursing profession written by a nurse who was among the first of her profession to enter this specialized field.

\* \*

***A Treatise on Obstetric Labor***

By Richard Torpin, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, University of Georgia School of Medicine. Augusta Obst. & Gyn. Book Co., Augusta, Ga. 1948.

The material presented in this unusual book is based on a ten year study by the author in which there was adequate control of obstetric material comprising nearly three labors per day. A report on 73 case histories is included. Students will find this very interesting reading and packed with much useful information.

\* \*

***A Program for the Nursing Profession***

By the Committee on the Function of Nursing. The Macmillan Company, New York. 1948. Price, \$2.

\* \*

***Mayo Clinic Diet Manual***

By the Committee on Dietetics of the Mayo Clinic. W. B. Saunders Company, Philadelphia. 1949.

The title is sufficiently descriptive.



**Cornell Conferences on Therapy: Vol. III**

Edited by Harry Gold, M.D., Managing Editor, and Associates. The Macmillan Company, New York. 1948. Price, \$3.50.

These conferences were initiated in 1937. They have covered much ground. Men of acknowledged authority have been the participants, therefore, the material presented is of more than usual importance and interest. In this volume the treatment of the following conditions is discussed: Congestive failure; peptic ulcer; pneumonia; barbiturate poisoning; hepatic insufficiency; pain due to muscle spasm; thrombophlebitis; alcoholism; infections of the genitourinary tract. The use of streptomycin, protein hydrolysates, BAL, and cathartic agents is also discussed.

♦ ♦

**A. M. A. Intern's Manual**

W. B. Saunders Company, Philadelphia. 1948. Price, \$2.25.

This book is definitely a "must" for every intern. It is packed with useful information.

♦ ♦

**Textbook of Attendant or Practical Nursing**

By Katharine Shepard, R.N., Director Household Nursing Association, Boston. Ed. 3. The Macmillan Company, New York. 1948. Price, \$4.25.

**A Synopsis of Histology**

By A. Rendle Short, M.D., F.R.C.S., late Professor of Surgery, University of Bristol; C.L.G. Pratt, M.D., Lecturer in Mammalian Physiology, University of Cambridge, and C. C. N. Vass, Ph.D., M.B., Reader in Physiology, University of London. Ed. 4. The Williams & Wilkins Company, Baltimore. 1948. Price, \$6.

A very handy and complete exposition of what the student should know about physiology.

♦ ♦

**Common Skin Diseases**

By A. C. Roxburgh, M.D., F.R.C.P., London. Lecturer on diseases of the skin, St. Bartholomew's Hospital. Ed. 8. The Blakiston Company, Philadelphia. 1948.

Rewritten with inclusion of much new material.

♦ ♦

**Introduction to Physical Biochemistry**

By J. M. Johlin, Ph.D., Associate Professor of Biochemistry, Vanderbilt University School of Medicine. Ed. 2. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers. 1949. Price, \$3.75.

Revised and brought up to date.

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Head of the Anatomy Division, Cleveland Clinic Foundation; Associate Professor of Biology, Western Reserve University.

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(Note: Slides 1 through 15, H&E stain.)

MSu/1 Rabbit's ear showing site of incisions during a 17 day period.

MSu/2 Wound 1 day after incision, showing cartilage and opposite side of ear intact. l.p.

MSu/3 Wound after 1 day, showing blood, serum and slight cellular infiltration. m.p.

MSu/4 Wound after 2 days, showing beginning organization of blood clot. m.p.

MSu/5 Wound after 2 days; fibrin and fibroblasts intruding into break in cartilage. h.p.

MSu/6 Wound after 3 days, showing marked organization. m.p.

MSu/7 Wound after 3 days, showing dense cellular infiltration of blood clot. h.p.

MSu/8 Wound after 6 days. Epithelium is regenerated; blood and serum replaced by dense cellular fibrous tissue. m.p.

MSu/9 Wound after 6 days, showing cellular infiltration into break in cartilage. Degenerated cartilaginous cells lining the break. h.p.

MSu/10 Wound after 8 days, showing increase in fibers. m.p.

MSu/11 Wound after 8 days, showing degenerating cartilaginous cells and fibrous tissue growing into the divided cartilage. h.p.

MSu/12 Wound after 8 days. Epithelium is completely restored. h.p.

MSu/13 Wound after 10 days, showing fibers becoming predominant. Cells decrease in number; break in cartilage is filled with fibrous tissue; surrounding tissue reaction decreasing. m.p.

MSu/14 Wound after 15 days, showing fibrous tissue, further decrease in number of cells. l.p.

MSu/15 Wound after 17 days; scar formation. l.p.

(Note: Slides 16 through 26, Mallory stain.)

MSu/16 Same rabbit's ear showing site of incisions made during a 17 day period. l.p.

MSu/17 Wound 1 day after incision, showing blood cells red, fibrous tissue blue. m.p.

MSu/18 Wound after 2 days, showing decrease in red blood cells. m.p.

MSu/19 Wound after 3 days, showing marked organization. m.p.

MSu/20 Wound after 6 days. Epithelium is regenerated; red blood cells almost completely resorbed; ingrowth of fibrous tissue. m.p.

MSu/21 Wound after 8 days, showing increase in fibrous tissue. m.p.

MSu/22 Wound after 8 days, showing degenerated cartilaginous cells and ingrowth of fibers into break in cartilage. h.p.

MSu/23 Wound after 10 days, showing heavy fibrous tissue. m.p.

MSu/24 Wound after 13 days, showing new capillaries in fibrous tissue. m.p.

MSu/25 Wound after 15 days; increase in number of capillaries in fibrous tissue. m.p.

MSu/26 Wound after 17 days. Restoration of epithelium and connective tissue; cartilage has healed by fibrous union. m.p.

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